# PULP & PAPER

SEPTEMBER 1956

Watch California! It Will Be A Great Paper State page 9

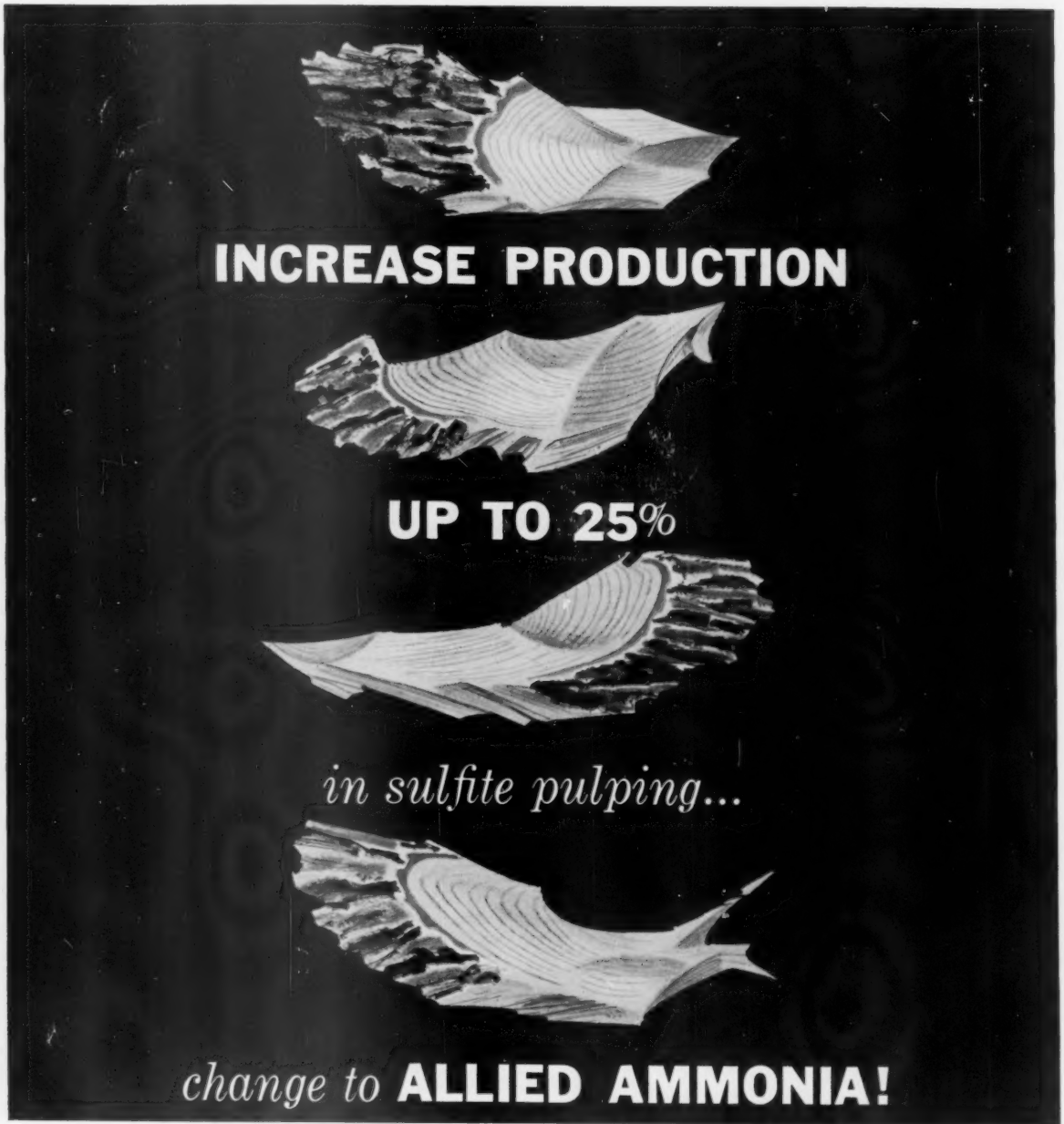
Gaylord Adds Power, Gets Set for Growth with South page 93

Story of a "Champion" Pulpwood Producer in Arkansas page 130



**THILMANY rhymes with DIVERSITY . . . there's plenty of it, too.**

Upper Mill (top left) is now converting; Lower Mill (lower right) where most expansion takes place. Story begins on Page 80.




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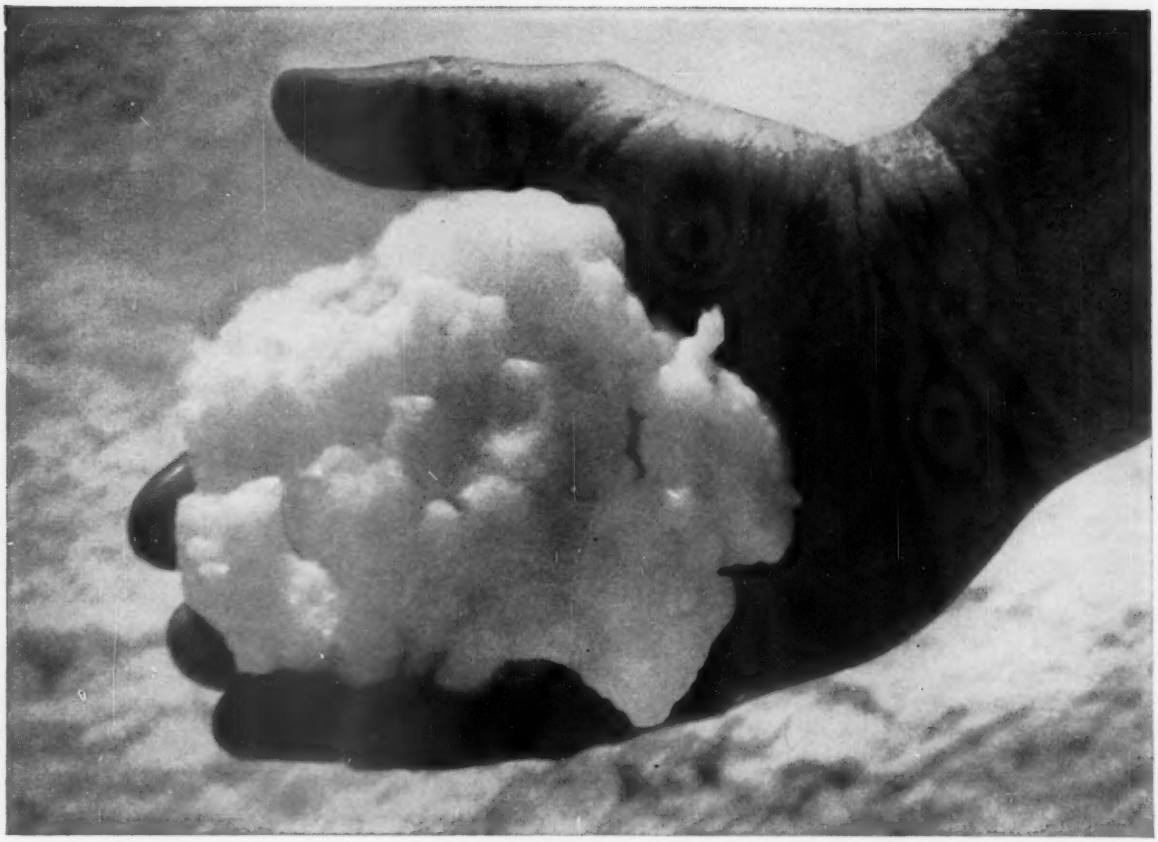
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Photograph of Western Hemlock pulp bleached snowwhite at world's largest specialty paper mill—The Camas Division, Crown-Zellerbach Corporation.

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PULP & PAPER

September 1956

VOLUME 30
NUMBER 10

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# PULP & PAPER EDITOR READS HIS MAIL



## Likes Personal News

Portland, Ore.

Editor: PULP & PAPER is unquestionably the outstanding magazine of the industry. It carries all the news, and the make-up of the magazine is always the very highest order.

One of the interesting features of your magazine is the personal columns. Nowadays, there are so many men changing from one area to another and also there is the advancement of the younger men to top positions that this column has a lot of interest. It is nice to see these fellows move up in their positions and it is always interesting to read where they are and just what they are doing.

In these days, the personalities of the mill have so much to do with the success of it, it seems to us that to keep track of the people you know in the industry, regardless of where they may be, makes for very interesting and refreshing reading.

RAY SMYTHE

## Ode of a REEL YANKEE doodle DANDY

Hudson Falls, N.Y.

Editor: One of our stenographers composed a farewell poem for a fellow stenographer (EDITOR'S NOTE –Obviously No. 2 stenographer quit for reasons which are S.O.P.). We had it copyrighted and printed for limited distribution.

MRS. AGNES B. PALMER
The Sandy Hill Iron & Brass Works

Portions of the poem follow:

You will find a day will come–
(Just listen to your friends)–
When you'll be mighty glad you learned
So much about WET ENDS.

If changes are not promptly made
The child will be a squealer.
That's why we think you'd better learn
To be a PEPPY PEELER.

And then you probably will plan,
When changing his attire,
To use a lot of talcum
To keep the BABY DRYER.

You'll want to take the greatest care
Of your dear little NIPper.
Of course you'll need a DOCTOR
To keep him strong and SHIPPER.

Since you will be his mother,
This fact alone explains
Why we're so sure his HEADBOX
Will be just stuffed with brains.

We're sure that he'll be brilliant
When his school days arrive.
We hope he's not an IDLER
But has a lot of DRIVE.

Of course, about his future
We would not like to joke.
We know he'll be a HUSTLER
And never will be BROKE.

He'll have a dog – a BARKER.
That's every small boy's goal.
They'll both get down upon the floor
And have a DANDY ROLL.

Now we'll all watch the CALENDER
'Til notices appear
And we read in all the JOURNALS
That the day of days is here.

NINA JANE PASHLEY

## Letters to the Editor Invitation to Germany

Frankfurt-am-Main, W. Germany

Editor: Preparations for the Achema 1958–The 12th Chemical Apparatus and Equipment Congress and Exhibition in Frankfurt during May 31 to June 8 1958–have been proceeding successfully. You and your readers are cordially invited to attend this event. Write to Dechema, Frankfurt-am-Main-W. 7 Postfach, for assistance in reservations and information.

We expect to entertain some 10,000 specialists and experts from Germany and abroad, including many from pulp and paper industries. There are over 47,000 sq. meters of exhibition space already reserved and the total space of 60,000 sq. meters will not be adequate to meet all demands.

The Achema Year Book–the European Catalog of Chemical Apparatus and Equipment–will appear in four languages–English, French, German and Spanish.

For the first time in the Achema Congresses there will be a separate exhibit for nuclear physics and technology. Other divisions will be for laboratory technology, measurement and control technology, operational technique, pulps and fittings, materials, chemical technology, and research and literature.

Achema Congresses and Exhibitions are recognized the world over as a meeting place for manufacturers and designers of chemical apparatus and equipment.

We know that you have readers in many countries, as witness your recent WORLD REVIEW NUMBER with contributions from so many nations. We want to especially invite your readers to Frankfurt.

DRS. BRETCHNEIDER and ROHN
Dechema (Deutsche Gesellschaft fur Chemisches Apparatewesen)

## Forest Service Still at Work On Timber Resource Review

Washington, D.C.

Editor:

We appreciate your continued interest in the Timber Resource Review and your courtesy in forwarding copy of an article on it from the May issue of PULP & PAPER. Incidentally, the total number of comments we received *numbered nearer 2,000 than the 200 mentioned* in this article.

At the present time we are still working on revision of the review draft report. As your article indicated, we will be "knee deep" in this job for the next several months so that currently there is no additional news we can give you, other than to enclose a copy of a popular pamphlet, "People and Timber" which is based on the Timber Resource Review.

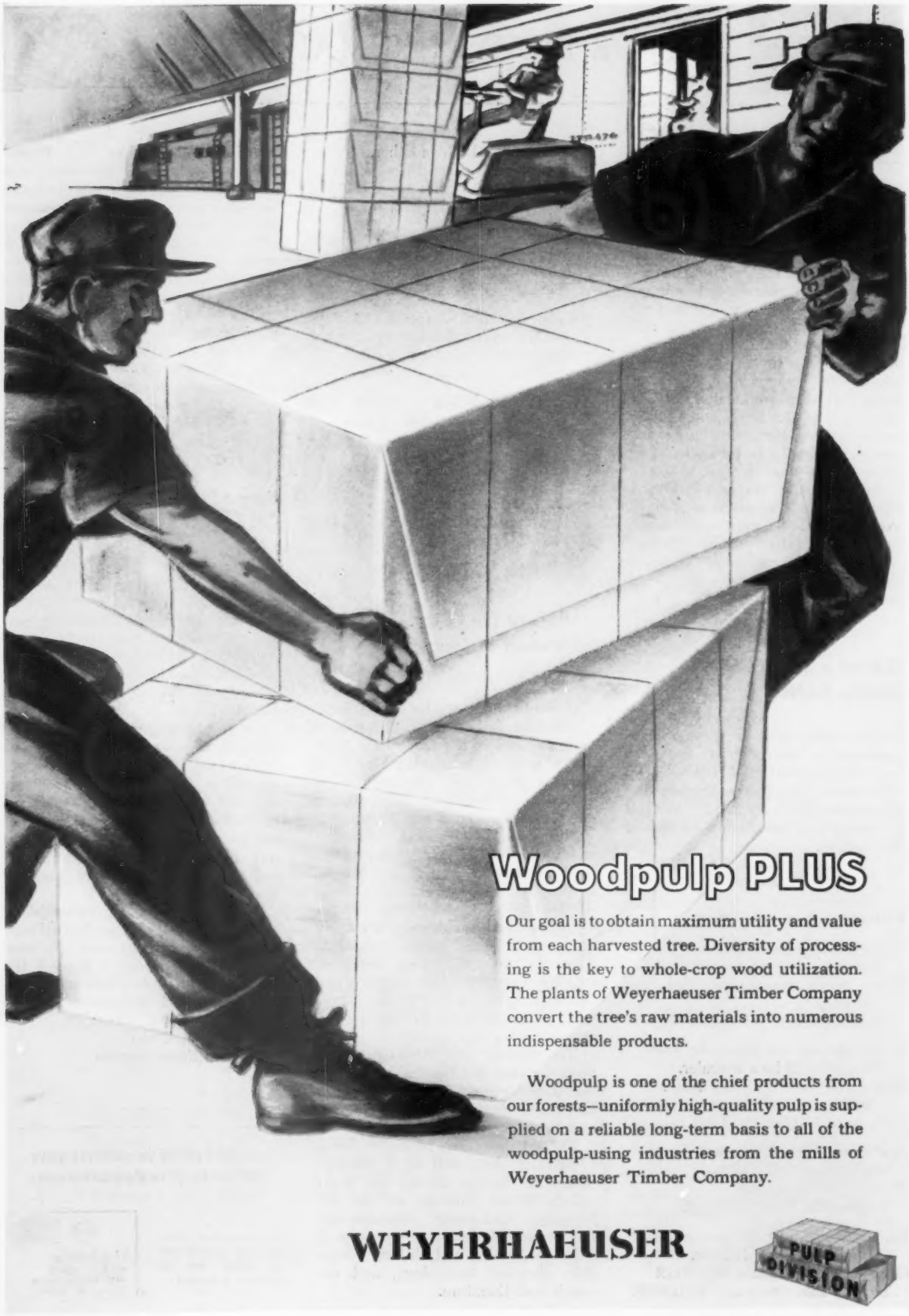
The demand for the review draft has been so great that our limited supply is practically exhausted. We hope "People and Timber" will meet the needs of most readers who want only a summary of our findings.

EDWARD C. CRAFTS
Assistant Chief
U. S. Forest Service

**HERE'S HOW to address your letter to this department:**

No anonymous letters will be considered but names may be withheld if desired.

The Editor
PULP & PAPER
1791 Howard Street
Chicago 26, Illinois



# Woodpulp PLUS

Our goal is to obtain maximum utility and value from each harvested tree. Diversity of processing is the key to whole-crop wood utilization. The plants of Weyerhaeuser Timber Company convert the tree's raw materials into numerous indispensable products.

Woodpulp is one of the chief products from our forests—uniformly high-quality pulp is supplied on a reliable long-term basis to all of the woodpulp-using industries from the mills of Weyerhaeuser Timber Company.

**WEYERHAEUSER**

PULP DIVISION

# PULP & PAPER NEWS FROM 'ROUND THE WORLD

**YUGOSLAV EXPORTS CONTINUE WEST . . .** Tito's recent confab with Moscow's big men and continuing Russ-Yugoslav negotiations apparently will have little or no effect on its exportation of woodpulp to the free world. During the past year, woodpulp exports were shipped mainly to Italy, South America and Great Britain.

During the year, Yugoslavia exported 14,622 tons of groundwood and chemical woodpulp west. Very little went to Moscow. With production of woodpulp for export increasing every year, this country has become an important source of pulp for countries of the free world. It could cause grave concern if this export philosophy was changed by Tito's latest attempts to woo Kremlin favor.

Meanwhile Yugoslavia continues to build its pulp industry. Last year it produced some 60,433 tons of chemical woodpulp and 29,906 tons of groundwood pulp. This represents an increase of about 35% over chemical pulp production in 1953 and a major increase over 1954.

**RUSS-FINISH PACT . . .** Under a recently completed trade agreement with Finland, Russia will import: One newsprint machine; board mill machinery for one mill with one machine and accessory equipment; equipment for a mechanical woodpulp mill; washing filters for chemical woodpulp (16 units); a soda recovery unit; one slab chipper; five 10-blade chippers; machinery for the manufacture of cigaret paper, etc. Also, some 400,000 cu. m. of pulpwood; 27,500 short tons of dissolving pulp; 11,000 tons of sulfite pulp, unbleached; 73,370 tons of paper including 13,200 tons of newsprint; 41,800 tons of board.

Some Russian exports in return to Finland will be caustic soda; tractors (300) and timber, among many other items.

**K-C TIES IN WITH CHIHUAHUA MILL . . .** Kimberly-Clark has signed a long-term agremeent to provide the technical direction of Cellulosa de Chihuahua, S. A., Chihuahua, Mexico, which only recently had been built by Italian technicians and engineers of Snia Viscose company.

Cellulosa de Chihuahua represents one of the largest industrial organizations in Mexico. Its integrated operation includes a mill manufacturing bleached sulfate pulp for the domestic needs of the paper industry, as well as dissolving pulp. Woodland operations also provide raw materials for a large plywood plant, saw mills, planing and creosoting plants.

A portion of the output of the pulp mill will be available for the Kimberly-Clark paper and wadding mills in Mexico. It recently bought the "La Aurora" mills in Mexico City and is installing a new machine in one and adding to other production.

Kimberly-Clark will also provide assistance in forest conservation and direction of pulp sales.

**N.Z. NEWSPRINT FOR U.S.? . . .** The view that New Zealand could have a ready market for newsprint in the United States has been expressed by two American Congressmen, Don Hayworth and John V. Beamer, who recently inspected the Tasman Company's project at Kawerau.

"We are both satisfied that in Kawerau you have one of the most economically-efficient newsprint and pulp mills in the world, and personally I would like to see New Zealand making six or seven times as much paper and pulp as planned. We could use it," said Mr. Hayworth. "America has an increasing demand for newsprint and we would only be too pleased to ship it half way across the world."

**JAPANESE ON TOUR . . .** Under auspices of the U. S. State Department, 13 technical experts from Japanese forest industries recently made a six-weeks' tour of U.S. mills and plants. The group, headed by Setsuro Kagesa of Kokusku Pulp K. K., arrived in San Francisco and disbanded in Washington, D. C., Aug. 17. They visited Crown Zellerbach and Weyerhaeuser mills, the U.S. Forest Products Laboratories in Madison, Wis., New York and Memphis, Tenn. After disbanding in Washington, the group's members were on their own for further individual travel throughout the country.

**COMPETITION IN FRANCE . . .** Canadian exporters of pulpwood to France may face stiff competition this year because of the entry of Soviet Russian suppliers, according to the Canadian department of trade and commerce.

Canada ranked as second last year among the nations supplying pulpwood to France, Finland leading with sales totalling $11,300,000. Canada's sales amounted to $4,400,000, and Russia was third with $2,200,000. All others totalled only $800,000.

The significant change in the market is that in 1953 and 1954 Russia sold no pulpwood at all to France, although last year Russia accounted for 11.8% of the market, compared with Finland's 60.4% and Canada's 23.5%. Canadian trade scouts expect that Russia's percentage will rise this year, since Finland is already shipping as much pulpwood as she can spare.



**LARGEST MANUFACTURERS OF COATED PAPERS IN JAPAN** is Kanzaki mill of Kanzaki Paper Mfg. Co., Ltd., producing 50 tons a day of coated papers on 6 coating machines and 90 tons of uncoated stock. Mill started up first semi-chemical pulp production and first cast coated paper made in Japan in Mar. 1955.

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PUGET PULP

*With output now exceeding 450 tons daily, more PUGET PULP is available for the market*

## PUGET SOUND PULP AND TIMBER COMPANY

BELLINGHAM • WASHINGTON

*SPECIAL PULP & PAPER FIELD REPORT*

# Watch California Grow as Paper State

—San Francisco

From a PULP & PAPER editor's notebook, on tour of new and growing mills and industries up and down the Pacific Coast:

California is going to be one of the great paper making and paper converting states of this nation. You can paste that in your hat for sure. That doesn't mean the Pacific Northwest states and British Columbia, Alberta and Alaska won't grow in paper and pulp, as they are doing, but keep your eye on California.

California population has already passed 13,000,000 (New York, leading paper making and converting state, has 15,500,000). The Golden Bear state is the fastest growing populationwise in the nation. Back in 1952 it was 15th in papermaking, it is easily 10th or 11th now, and the day is coming when it will challenge the leaders—New York, Wisconsin, Michigan and Louisiana.

Starting up its new 400 tons per day $18,500,000 paper mill at Antioch, Calif., this month, Crown Zellerbach is going to demonstrate the economics of bringing "noodle pulp" 1,100 miles by tanker from British Columbia to make paper and converted products in the heart of the most dynamic paper consuming territory in the world.

**"ANOTHER CAMAS"** . . . Antioch, close observers of the western industry say, is going to be "another Camas" (Camas, Wash., division of CZ is called the biggest specialty mill in the world). Already CZ has a bag plant at Antioch, a box plant will be built, and it has foremindedly acquired extensive territory along the San Joaquin River for further future expansion. Fibreboard Products has two mills nearby—one of the two being the first modern large woodpulp mill in California, as well as a paper mill. These mills are on tidewater, between San Francisco and Sacramento. The Feb. 1956 issue of PULP & PAPER, page 92, carried a story describing how CZ had a special tanker built and developed the plan to ship nodular or "noodle" pulp from its kraft mill at Elk Falls, B.C., where a 450-ton pulp expansion has been carried out. In any unlikely emergencies pulp can be shipped from Port Townsend or other northern CZ kraft mills in lap form.

**THE REMARKABLE "LITTLE MACHINE"** . . . Crown also has started papermaking for the first time in its plant at Los Angeles, heretofore only a converting operation. Here is the 91-in. "Little Machine That Dared to Run Away from Home," as shown in a drawing in the Reliance Electric & Engineering advertisement in PULP & PAPER last month—Aug. issue, pages 18-19.

As stated in CZ's own ads in *Newsweek*, *Time* and *Wall Street Journal*, the machine has opened up a new marketing concept—making tissue and converted products in assembly-line manner right "at the doorstep" of millions of housewives and other consumers.

Not far away midst the orange groves of Fullerton, Calif., Kimberly-Clark has likewise started up a new tissue and converted products mill.

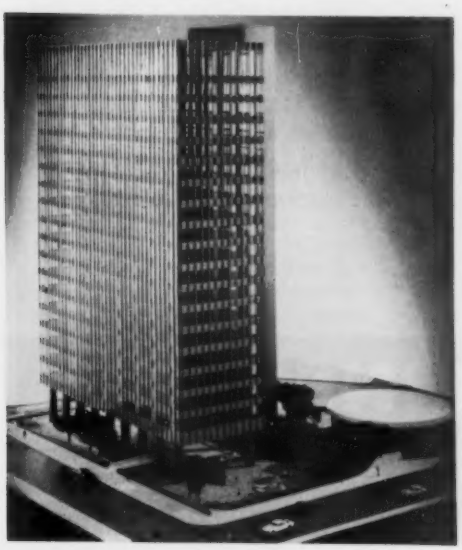
Other companies have new footholds in California—for papermaking and converting. Marathon Corp. has a new converting plant at Modesto. International Paper Co. is converting at Los Angeles. American Forest Products Corp. will start a $1,000,000 paper mill in 1957 adjacent to its container plant at Newark, Calif.

Longview Fibre Co.'s converting plants at Oakland and, particularly, at Los Angeles, as well as those in Longview, Wash., and the new one in Seattle, are increasingly productive. Robert W. Stevens has engineered and is manager of another 115-ton cylinder machine board mill in Southern California—Kalof & Co., at Port Hueneme. Container Corp. of America has started building a new 150-ton board mill at Santa Clara.

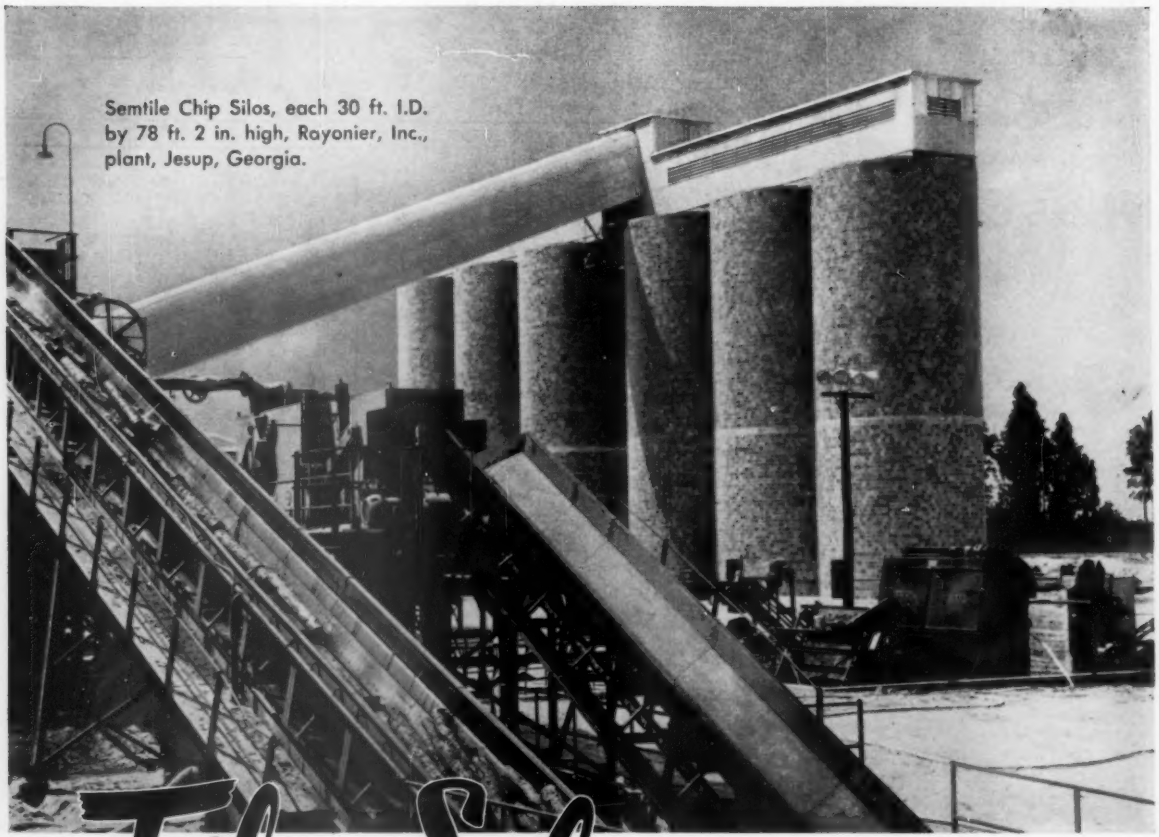
There are more than 50 converting plants of one sort or another in Los Angeles alone. There are more than 70 in the remainder of the state. Besides having its bag plant at San Leandro, St. Regis recently acquired a Salinas converter which had a specialty produce packaging business.

**MORE CALIFORNIA MILLS** . . . In Northern California there was

**IN THE PARLANCE OF THE INVESTMENT WORLD, "Growth Industry" is a term used to differentiate certain industries from those which, by their very nature, are necessarily static, others that are speculative, etc. It has only been in recent years that most of the investment world has recognized pulp and paper as a genuine "Growth Industry." Its planning is longterm, its markets and uses are basic, they keep increasing, and it is the only major industry based upon a renewable resource—trees. Depressions may come and go—they will never wipe out trees.**



**SYMBOL OF WESTERN INDUSTRY GROWTH** . . . This is model of new Crown Zellerbach headquarters building. When PULP & PAPER editor was visiting there, San Francisco paper, with local pride, referred to this 20-story steel and glass structure as "finest office building in world." Site is between Market and Bush, Sansome and Battery Sts. Foundation will be 8 ft. thick concrete mat poured 30 ft. below street level. All floors will be free of interior columns, with open views of city and harbor. Below will be 2-level 150-car garage.



Semtile Chip Silos, each 30 ft. I.D. by 78 ft. 2 in. high, Rayonier, Inc., plant, Jesup, Georgia.

# Tile Silos

## for Storage of Dry Materials

These enormous chip silos, engineered and erected by Stebbins, are steel-reinforced concrete faced inside and outside with vitrified tile. No forms were required—a Stebbins construction method that results in substantial savings.

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***Write for Bulletin A-153***

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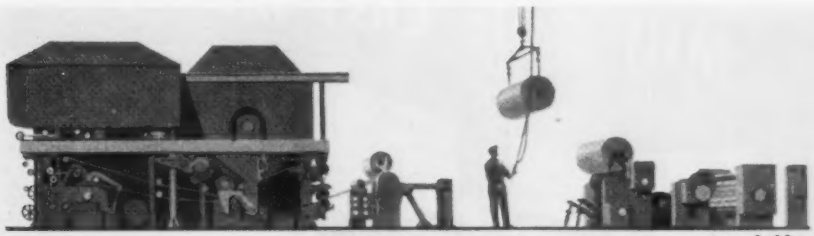
**STEBBINS**

**Engineering and Manufacturing Company, Watertown, N. Y.**

STEBBINS ENGINEERING CORP. — 1504 TOWER BLDG., SEATTLE, WASH.

CANADIAN STEBBINS ENGR. & MFG. CO., LTD. — TOWN OF MOUNT ROYAL, MONTREAL 9, CANADA

# NEWS OF THIS "GROWTH INDUSTRY"



*Our little machine in Los Angeles produces 20 tons of household paper products every day. Similar paper machines are planned for other metropolitan centers in the near future.*

**THE LITTLE MACHINE THAT DARED TO RUN AWAY FROM HOME . . .** This sketch shows unusual cylinder machine, 91 inches, much smaller than conventional machines, which is making superior tissue products for Crown Zellerbach at Los Angeles, in heart of one of richest paper markets in world. Described as a "portable" machine with Reliance Electric & Engineering drive, Crown Zellerbach stated in advertisements in **Time** and **Newsweek** that "similar paper machines are planned for other metropolitan centers in the near future." No details about the "little machine" have been released, but it may be pioneering a new trend—with paper mills farther from sources of pulp supply, but closer to markets of importance. CZ says its "Little Machine" is "making bathroom tissues and napkins near the housewife's doorstep." Assembly-line principle is applied to papermaking to produce these end products.

found to be high interest in the Simpson Logging Co.-Fibreboard Products joint plan for a new woodpulp mill and board mill at Eureka. Likewise, in Diamond Match's plans for integrated products from wood, including woodpulp molded products and possibly later woodpulp for other uses.

Another important California lumber firm is now dickering with one or two well known pulp and paper firms to be partners in a new mill.

Over in the Taylor-Snowflake area of Arizona, Southwest Lumber Mills Inc. is planning a pulp and paper mill to cost $30- to $40,000,000.

**NEW OREGON MILL . . .** Brooks, Scanlon, Inc., closely associated with Powell River Co. and long established as a lumber manufacturing organization at Bend, Ore. (and formerly at Foley, Fla.), is making surveys to ascertain the feasibility of undertaking possible production of pulp and paper in Eastern Oregon. According to Gen. Mgr. Freeman Schultz, A. E. Messer & Associates, Portland consulting engineering firm, has been engaged.

State Engineer Lewis A. Stanley reports that the Messer firm has tapped a heavy flow of water at 600 ft. level in the present investigations and interest has been shown in leasing the area's state-owned Tumalo "reservoir site" as a disposal basin. This site became part of a 1914 water development project but was subsequently abandoned when the faulted basin failed to hold water due to drainage escapement into underground caverns. This one-time adversity may now become an important factor in the industrial development of Central Oregon.

The company has been modernizing its operations during the past year and management has expressed anticipations of installing additional production processes to facilitate more complete wood utilization. A decision as to whether this will be the manufacture of pulp or hard-pressed board is expected to be determined by results of the current survey work.

**WALDORF PAPER PRODUCTS PLANS MILL IN MONTANA . . .** Flying up to the Northwest, biggest news in pulp and paper circles is plan of Waldorf Paper Products Co., of St. Paul, Minn. to build a pulp mill near Missoula, Mont., using U.S. Forest Service timber in that area. This is the first time that a pulp mill is really "in the works" for that state. Several companies surveyed the region in post-war years but decided for special reasons of their own to go elsewhere for expansion.

But Waldorf is set to definitely go ahead, possibly making a nodular type of pulp, for easy shipment without complete drying and finishing, to the 720-ton St. Paul board mill. Waldorf already has a semi-chemical pulp mill at St. Paul. P. H. Schilling is president and treasurer of Waldorf and N. H. Sandberg is executive vice president. PULP & PAPER has carried several stories from the Forest Service and industry sources in Montana and has long predicted there would eventually be a mill for this state.

## More Mills in South

**MEAD BUYS SOUTH CAROLINA SITE . . .** The Mead Corp. has purchased a new mill site of 1,000 acres on the Savannah River, 3 miles west of Calhoun Falls, S.C. Specific plans are not presently being announced, said President H. E. Whitaker.

For some time, Mead was reported looking for a new site in the South. Presently it jointly participates in mills at Brunswick, Macon and Rome, Ga., and it has fully-owned mills in six locations in Tennessee, North Carolina and Virginia. It jointly owns over 1,000,000 acres of timberlands in the Southeast.

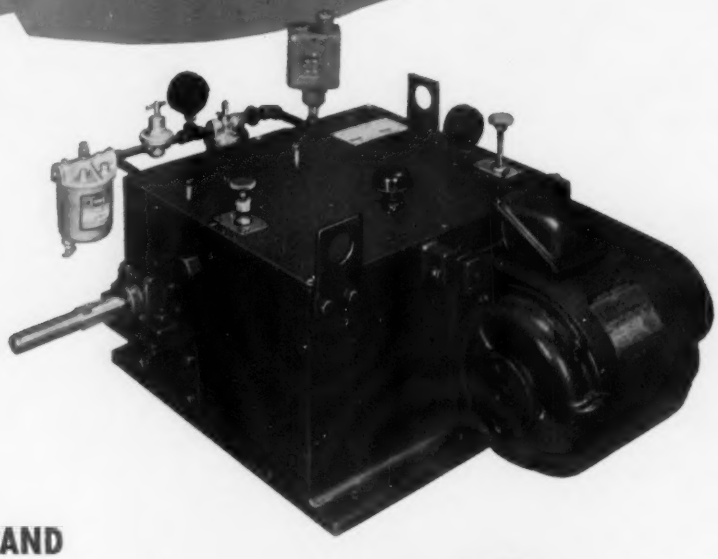
**CHAMPION INVESTING $15,000,000 . . .** That much will be spent on new plants and machines this year alone by Champion Paper & Fibre Co., primarily in the South. It has invested $92,000,000 on a capital program in the ten years 1946-1956 (Mar. 31).

**UNION BAG CHANGES MIND ABOUT NEW MILL . . .** Chairman Alexander Calder of Union Bag now says "the advantages of merging with Camp Mfg. of Franklin, Va., far outweigh those of building a new mill." For a while recently Union was considering three sites for a new mill in the South, and products ranging from newsprint to board and pulp. The new combined company has been named Union Bag-Camp Paper Corp. Camp stockholders receive 1.75 shares of Union Bag-Camp Paper for each share of Camp common and Camp common B. Camp gives Union greater manufacturing capacity and a bleached kraft unit, most rapid growing segment of this industry.

Camp capacity is being increased from 375 to 425 tons a day this month. Another $18,000,000 will be spent to boost it to 600 tons. Also Union gets 240,000 acres of woodlands, not the least important gain.

**Continued on page 13**

# Defective Mill Rolls Cost Money



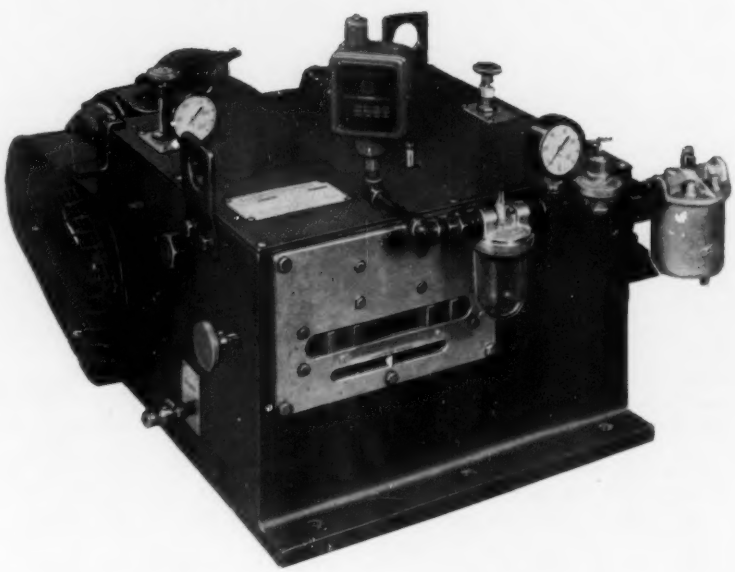
## PREVENT WRINKLES AND HARD AND SOFT SPOTS

Paper making is an art and hence most sheets are far from perfect in texture or calibration. Rewinders, by nature of their operation, multiply and compound errors or defects.

The Ross Midwest Hydroscillator is designed to overcome unevenness of the sheet by an averaging process of oscillation.

Ross Midwest Hydroscillators operate hydraulically—deliver strokes from ½" to 3¾"—oscillate at speeds from 0 to 24" per minute—develop up to 11,000 lbs. thrust—are easy to install—require moderate amount of floor space.

Because Ross Midwest Hydroscillators are simple in design and ruggedly built, they will, with reasonable attention, deliver years of service.



RMF

**THE ROSS MIDWEST FULTON CORP. • DAYTON, OHIO**

A SUBSIDIARY OF J. O. ROSS ENGINEERING CORP.

# NEWS OF THIS "GROWTH INDUSTRY"

**PENSACOLA ADDS HARDWOOD STORAGE . . .** For hardwood chips and pulp, St. Regis at Pensacola, Fla., is putting in two new 80-ft. chip silos and two 60-ft. high 36-ft. diameter storage chests. This will allow for 300 tons of hardwood pulp for bleached foodboards. Hardwood pulp will be made one day a week in the softwood pulp mills.

**MORE MILLS IN SOUTH . . .** Another mill is being built in Lousiana by one of the major pulp and paper companies. Sutherland Paper Co. is continuing with engineering work for its possible new venture into the South where it optioned a mill site in Richmond county, near Augusta, Ga. Another Wisconsin company is expected to pick a Southern site.

**GALYORD INSTALLS PANDIA DIGESTER . . .** A Pandia continuous digester, the first commercial installation of this nature in the South, will be installed at Gaylord Container Corp. pulp and board mill in Bogalusa, La.

Designed to produce neutral sulfite semichemical pulp from hardwoods, the Pandia system will be used experimentally at first to make various grades and types of kraft pulp. Pandia is a division of Black-Clawson Co.

The unit will have a large screw feeder, two 42-in. diameter digester tubes, a Pandia discharger, and will be equipped with necessary equipment for recirculation of cooking liquor. It will be so constructed that it may be expanded into a four-tube digester which will eventually produce about 300 tons of pulp a day.

**CAUTHORNE GETS CONTROL OF JAMES RIVER . . .** Cauthorne Paper Co. at Richmond, Va., has purchased a controlling interest of common stock in James River Pulp Corp. at Columbia, Va., and has started expanding the newly acquired facilities.

Work at the James River installation has begun and is expected to boost daily production by 20 to 25 tons. A 600-ton hydraulic pulp press will also be installed.

**NEW MACHINE FOR SOUTHLAND . . .** Newsprint production at Southland Paper Mills, Inc., at Lufkin, Tex., will be increased to about 270,000 tons a year by the installation of a fourth newsprint machine. The company's new No. 3 newsprint machine, a 212-in. Pusey & Jones Fourdrinier, boosted company's capacity to 200,000 tons when it went into operation recently.

**HUDSON TISSUE MACHINE STARTS UP, NEW PLANS FOR PINE BLUFF PLANT . . .** The new Hudson Pulp & Paper Corp. $15 million tissue mill at Palatka, Fla., has begun limited operations and is expected to be in full production of facial tissues and napkins at this printing. Tissue mill is an integrated part of the kraft mill, which underwent a $20 million expansion just a few years ago. The new addition will produce 120 tons of bleached kraft pulp a day and 80 tons of tissue.

Hudson has also announced that it will expand its multiwall plant at Pine Bluff, Ark., purchased from Hammond Bag & Paper Co. last summer. About 40,000 sq. ft. will increase size of the plant to 107,500 sq. ft.

**ECUSTA ADDS EQUIPMENT . . .** Two new E.D.Jones & Sons Co. pulp slashers have been started at Ecusta Paper Corp., Pisgah Forest, N.C. Company officials said the new equipment will make possible a greater diversification of Ecusta's specialty paper products as well as increasing efficiency in the processing of wood pulp content papers previously in production. Changes in the refining room were completed last November to make room for the new slashers.

**I.P. PAVES WAY FOR RALEIGH CONSTRUCTION . . .** International Paper Co. has recently okayed and signed contracts which pave the way for construction of the new corrugated container plant at Raleigh, N.C. The $500,000 plant is expected to be completed by early 1957.

**MERGER TALK . . .** Directors of Owens-Illinois Glass Co. and National Container Corp. met separately at Toledo, O., and New York City early in August to consider a proposed merger of the two companies, it was announced by J. P. Levis, chairman of Owens-Illinois, and Samuel Kipnis, president of National Container. The proposed merger would be effected through an exchange of stock. Owens-Illinois holds 2,100,000 shares of Owens-Corning. The merged company would continue as Owens-Illinois Glass Co. Operations by National Container would be conducted through a wholly-owned subsidiary of the same name.

**NEKOOSA-EDWARDS MULTI-MILLION EXPANSION . . .** A two-year expansion program including a new Beloit paper machine at the Nekoosa mill will approximate $13.5 million, according to John E. Alexander, president and general manager. The machine, largest single item in the plan, will trim 145 in. and operate up to 1500 fpm. It is scheduled for completion late in 1958.

Major part of the program calls for construction of a new woodroom designed to handle separately hard and soft woods and produce bleached sulfate pulp from both species. Two new digesters will be installed and probably an additional set of vacuum evaporators. An entirely new bleach plant will permit bleaching of hard and soft wood concurrently.

The Port Edwards sulfite mill is also included in this expansion and modernization program.

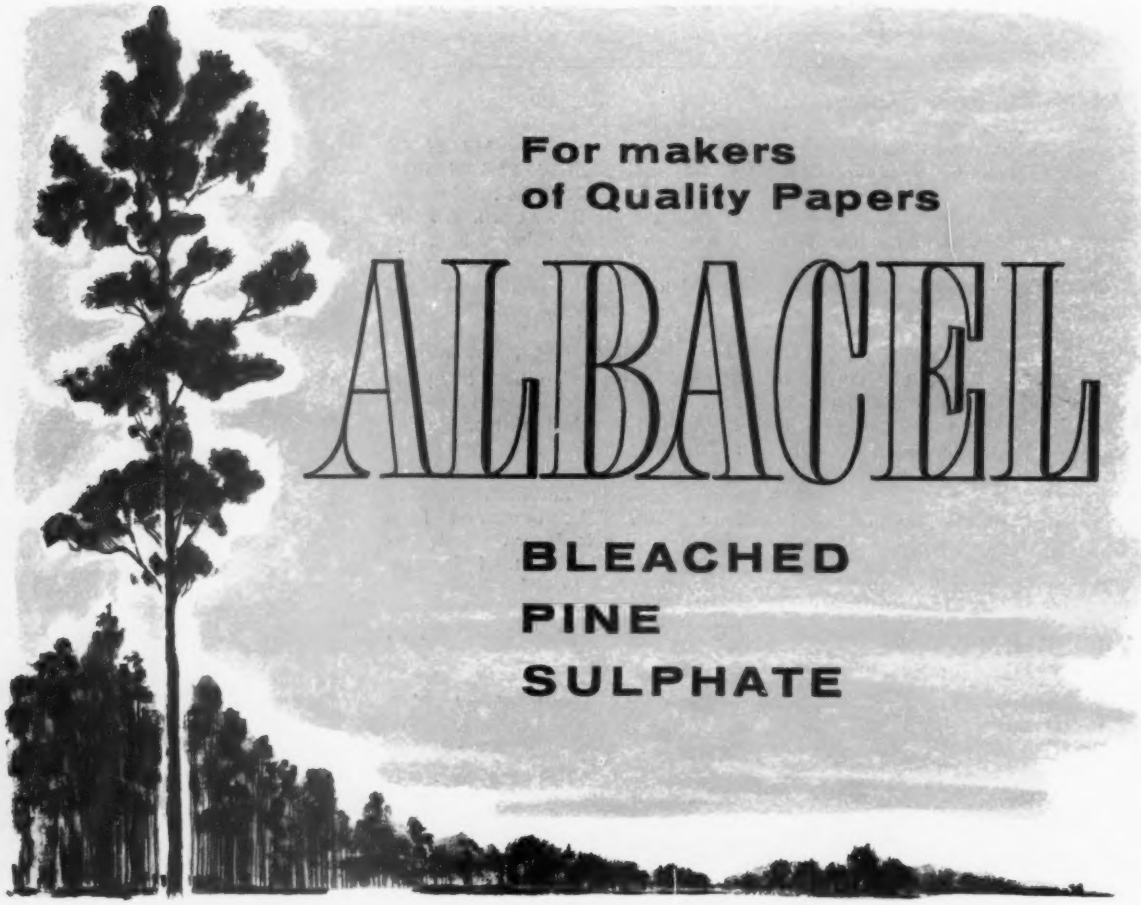


**Plans Mills in West**

O. R. CHEATHAM, President of Georgia Pacific Corp., which is building a kraft board and paper mill at Toledo, Ore., and also plans a mill at or near Juneau, Alaska, confirms that his company has purchased most assets of Coos Bay Lumber Co., for about $70,000,000. Coos Bay holds about 120,000 acres of timberland in Western Oregon, with about 4 billion ft. of timber. The lumber company is adjacent to Georgia-Pacific holdings. Toledo is 90 miles north of Coos Bay.

**ACTIVITIES IN MICHIGAN . . .** Sutherland Paper Co. has agreed to purchase 5,000 kilowatts of energy from Consumer Power Co. in Kalamazoo and tie this right in with Sutherland's industrial power setup, as regular supply. Up at Michigan Paper Co. in Plainwell new drives for No. 3 paper machine and a new turbine are among current improvements being made.

**KIMBERLY-CLARK MILL FOR NEW ENGLAND . . .** Purchase of 100 acres of land at New Milford, Conn., as the site for a new creped wadding mill has been announced by Kimberly-Clark Corp. Facial tissues, table napkins and toilet tissue will be




*Created by Papermakers for Papermakers*

Albacel is bleached pine sulphate . . . the cleanest pulp of its kind available from any source. Chlorine dioxide bleaching gives it outstanding strength and excellent brightness. Albacel is produced at Riegel Carolina's pulp mill at Riegelwood, N. C., with every refinement and control known to modern pulp manufacture.

**Riegel Carolina Pulps**

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**RIEGEL PAPER CORPORATION • 260 MADISON AVENUE • NEW YORK 16, N. Y.**

produced in a 300,000 sq. ft. plant by the spring of 1958. Employment is estimated at approximately 300.

John R. Kimberly, president and board chairman, said that the New Milford program is in keeping with current Kimberly-Clark policy of locating its manufacturing plants close to mass markets. Total corporation operations will include 21 plants when the New Milford project is complete.

**STARTS UP NEW YANKEE . . .** Seaman Paper Co., Otter River, Mass., has started up a new 124-in. Yankee Fourdrinier to make 30 tons a day of sulfate and sulfite machine-glazed papers, semi-crepe wadding and tissues. Total tonnage of the mill will be 55 tons.

**PULP EXPANSION IN ALASKA . . .** Ketchikan Pulp Co., owned jointly by Puget Sound Pulp & Timber Co. and American Viscose Corp., is adding another digester, which will moderately increase production at present. Its installation will permit work to be done on existing digesters where new Swedish type stainless steel cones are being installed. The linings are held in position by vacuum.

**NEW PULP USE . . .** Diamond Match Co. is test-marketing a new charcoal briquette package—it has a casing of molded pulp covering charcoal briquettes—which, when lighted, will provide fire for such usages as outdoor barbeques. Diamond Match has a 7-year contract with Cumberland Corp., a new Kentucky concern, for 70% of that company's production of briquettes. Diamond Match officials deny rumors that it is considering a merger with any other company.

**USES SAWMILL CHIPS . . .** Presaging early completion of Crown Zellerbach Canada's kraft mill at Duncan Bay, Vancouver Island, the first shipment of pulp chips produced in British Columbia sawmills for Elk Falls Co., CZC subsidiary, was recently delivered. Chips from sawmill waste will be the major source of raw material for the new 400 ton pulp mill, being built in conjunction with the company's existing newsprint mill as part of a $29,000,000 expansion program. Within a year the pulp mill will be increased to 500 tons.

**REMOVES NEWSPRINT TARIFF . . .** Canada's removal of the tariff on newsprint may turn out to be more than a goodwill gesture, according to some Canadian producers who point out that under some conditions their country's newsprint market is vulnerable.

"We are in a high-cost industry," a representative of the industry stated, following elimination of the 22½% protective tariff. "Our wages in Canada are tied to those in the U.S. and if demand ever slackened and world supplies became more abundant, some of the world surplus could be attracted to Canada and affect our marginal mills."

Canada's tariff action was agreed to at Geneva during a conference on international trade. Newsprint is Canada's most valuable export commodity. This year's production expected to be close to 6,500,000 tons. Canada has been consuming only about 8% of her newsprint output.

## 1,100 Ton Mills in West; Using Mostly Waste Wood

Portland, Ore.

More jottings from our editor-on-tour notebook:

Mr. John Q. Public doesn't know this, but the time has arrived when the pulp and paper industry may—if it so chooses—point an accusing finger to federal government, state and smaller owners of forest tracts and say: "Model yourself after our industry and do a better job of cleaning up your forests and using wood that is wasted and left to rot. Our economy can longer stand such waste if we are to achieve the fullest potential use of our forests."

Early next year Weyerhaeuser Timber Co. and Longview Fibre Co. will be making a total of 2,200 tons of market pulp, board and paper at the great forest industries city of Longview, Wash., and more than 85% of this production will be from wood formerly burned or wasted. Imagine that!—85% of all that production without requiring the cutting of one single additional tree. It is produced from chips made from what sawmills formerly burned and former forest left-overs, broken wood sticks, etc. The pulp and paper industry is even doing a clean-up job on lands that belong to the government, as well as the industry's own lands.

Weyerhaeuser's market pulp and board operations will be augmented 100 tons to 1,100 tons a day at Longview, with sulfite mill additions now going in. A new 180-in. hybrid machine with Valley Iron primary and secondary inlets, Rice Barton Fourdrinier, Black-Clawson dryers and Beloit finishing end equipment will be a notable addition at Longview Fibre before the year end, bringing its output up to 1,100 tons, also. The great bulk of Longfibre production is from sawmill chips.

Oddly enough, a third Far Western American mill—Crown Z at Camas, Wash.—will also reach a potential capacity of 1,100 tons next year with its kraft mill expansion. Its 15 machines, including one wet machine, make a wide range of products from tissue to board, of all weights, from 14 different grades of pulp. Here, too, the flow of sawmill chips—wood that formerly was burned—is major raw material. Camas also is making about 40 tons a day of alder and cottonwood chips.

Crown Z's Port Townsend, Wash., kraft mill is producing 99.7% of its output from sawmill left-overs. Crown figures that one-fourth of the one million tons of paper it makes every year in its Pacific Northwest mills are from former wood waste and scraps. Thus, it is conserving every year 103 million cu. ft. of standing timber.

**MORE SAWMILL CHIP USERS . . .** About 30% of the wood for the St. Regis mill in Tacoma likewise comes from sawmills. Incidentally, visiting this mill, its postwar Pusey Jones paper machine was seen to be running 1,700 fpm on 40 lb. sack, and the operators called it "the runningest machine without a pickup in the West." It makes a wide variety of grades.

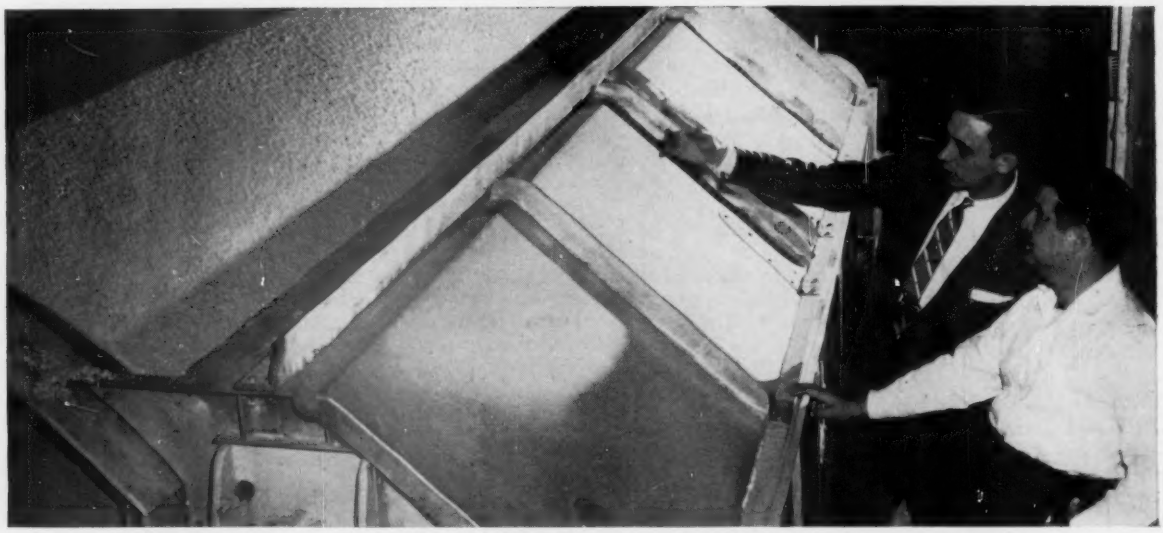
Western Kraft Corp., Albany, Ore., is increasing kraft linerboard capacity from 120 to 220 tons a day—every pound of it made from wood waste.

Close observers of the Western industry estimate that some 200 sawmills and plywood plants in that area are now selling chips made from their left-overs for a neat profit. About 20 years ago, it seemed almost impossible to interest many of the Western sawmills and plywood plants in this lucrative business.

It is interesting, too, to find three U.S. mills—Camas, Longview Fibre and Weyerhaeuser at Longview—all going over the 1,000 tons a day mark. Not long ago the only 1,000-ton mills in the world were a few in the South. Powell River Paper Co., up in British Columbia, also has exceeded this mark with newsprint and market sulfite. It surely won't be long before MacMillan & Bloedel's growing forest industry center at Port Alberni reaches the magic 4-figure mark. Crown's Elk Falls operations on Vancouver Island may eventually approach that figure, too.

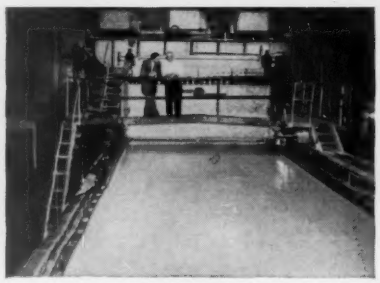
# Du Pont technical man follows through...

## helps Blandin Paper Company maintain smooth operation with Du Pont Peroxides for bleaching groundwood



Du Pont's Technical Service Representative, Mr. M. K. Gruetzner, and Mr. R. Snow, Blandin's groundwood superintendent, observe thickening groundwood prior to bleaching with peroxide.







Periodic personal check on bleaching operations with Blandin's plant manager, Mr. Myles W. Reif, and other plant personnel is an important part of the Du Pont technical service.

"Maintaining high standards is a constant challenge," states Myles W. Reif, plant manager of Blandin. "In March 1948, the installation of the Du Pont groundwood bleaching process helped us to produce new grades of printing papers with high brightness, good absorbency and improved cleanliness.

"Effective as this process has been, we feel the favorable acceptance of our bleached groundwood papers by the printing industry is due, in part, to the co-operation of the Du Pont technical service representative in helping us make this process operate most efficiently in our plant."

Paper mills everywhere are benefiting from Du Pont peroxides for bleaching groundwood, kraft, soda, sulfite, semichemical, and pulp made from waste paper.

* * *

**Complete technical details** and assistance on the use of peroxide for any of these pulps are available to you without obligation. We invite you to call our Peroxide technical representative in your area.

**DU PONT PEROXIDES**

**ALBONE®** hydrogen peroxide

**SOLOZONE®** sodium peroxide

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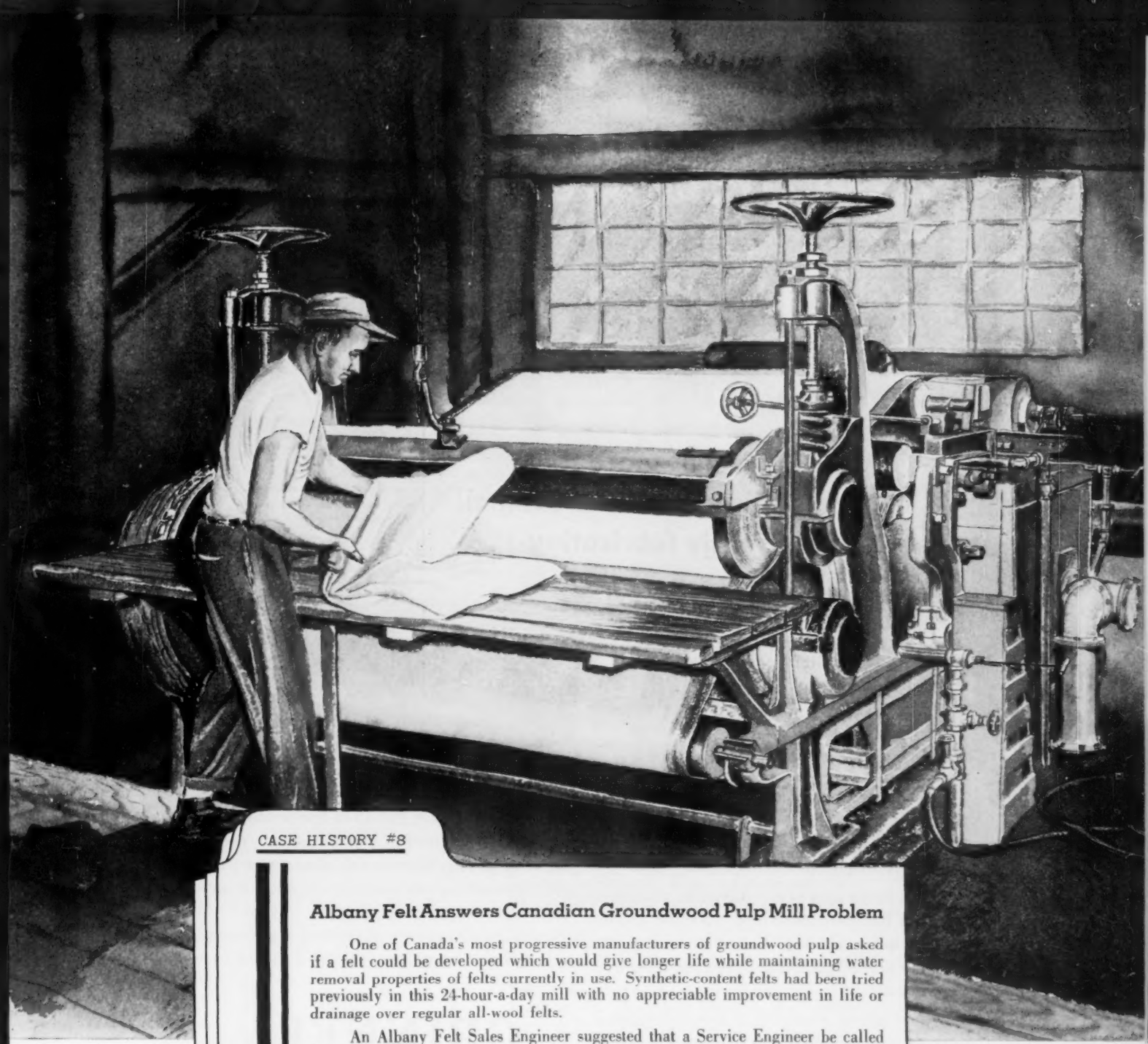
**NEW YORK & BOSTON AREA**
Call C. R. Lombard
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**WEST COAST AREA**
Call L. W. Blight
Portland, CApitol 7-1281

**SOUTHERN AREA**
Call A. M. Taber
Charlotte, FRanklin 5-5561

**OR...**

**Electrochemicals Department**
**E. I. du Pont de Nemours & Co. (Inc.)**
**Wilmington 98, Delaware**



CASE HISTORY #8

## Albany Felt Answers Canadian Groundwood Pulp Mill Problem

One of Canada's most progressive manufacturers of groundwood pulp asked if a felt could be developed which would give longer life while maintaining water removal properties of felts currently in use. Synthetic-content felts had been tried previously in this 24-hour-a-day mill with no appreciable improvement in life or drainage over regular all-wool felts.

An Albany Felt Sales Engineer suggested that a Service Engineer be called in to make a complete survey and review operating conditions. The information obtained, together with data on comparable mill operations, was carefully studied by the Albany designers and a chemically treated, synthetic-content trial felt was suggested.

RESULTS: After 18 months experience, average felt life increased from 38 to 61 days. In addition to increased felt life, water removal properties of the new felt were considerably better. The consequent higher daily production greatly enhanced the profit position of this mill.

**For improved felt performance on your machines, call in your Albany Felt Sales Engineer. His analysis of your problems, together with the efforts of the industry's top team of Service Engineers, Designers, Research and Laboratory Specialists, will bring you the famous "blue line" felts you need to help produce more *saleable tons per day!***

# ALBANY FELT COMPANY

"THE WORLD'S LARGEST MANUFACTURER OF PAPER MACHINE FELTS"

Main Office & Plant, Albany, N. Y. Other plants: Hoosick Falls N. Y., N. Monmouth, Me., St. Stephen, S. C., Cowansville, P.Q.

# 5 Industries... Well-Known Companies

**... typical of more than 100 companies for whom Grinnell is currently fabricating**

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NATIONAL ANILINE DIVISION OF ALLIED CHEMICAL & DYE CORP., Hopewell, Va.

**PULP & PAPER**
UNION BAG & PAPER CORP., Savannah, Ga.

**POWER**
PENNSYLVANIA POWER & LIGHT COMPANY, Allentown, Pa.

**BEVERAGE**
CARLING BREWING COMPANY, Natick, Mass.

**OIL REFINING**
TIDEWATER OIL COMPANY, Delaware City, Del.

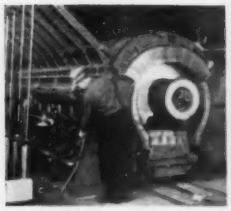
These successful companies, leaders in their respective fields, are building new facilities right now. The power and process piping needed in this construction is being fabricated in Grinnell shops.

In fact, at this time — or at any given time, more than one hundred similar-type orders for prefabricated piping are being worked on by Grinnell. Why this marked preference by so many companies for Grinnell?

Because piping fabricated in Grinnell shops is done under ideal conditions, with modern equipment, by personnel qualified for each class of work. Included in the price (which is determined in advance) are such items of expense as: interpretive engineering, shop sketches and planning, procurement of materials, power services, expendable tools and supplies. All piping is rigidly inspected and tested to comply exactly with customer specifications and applicable codes. Consult Grinnell on your next piping job.

ATTENTION: *A 30-minute color sound film showing the quality and economy of Grinnell Shop Fabrication of all classes of piping is available for group showings.*

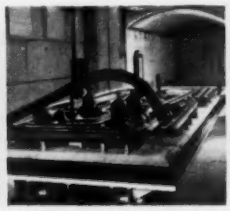
# GRINNELL
**WHENEVER PIPING IS INVOLVED**



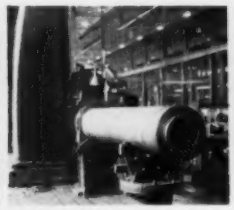
Pipe being heated to exact temperature required for proper bending



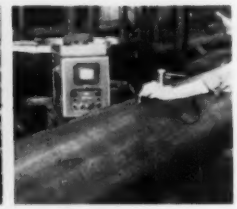
Skilled team completes bend in six minutes with pipe close to 2000°F



Fabricated piping, bending operation completed, enters stress-relieving furnace



Heavy wall pipe being machined to the proper welding bevel on a post mill

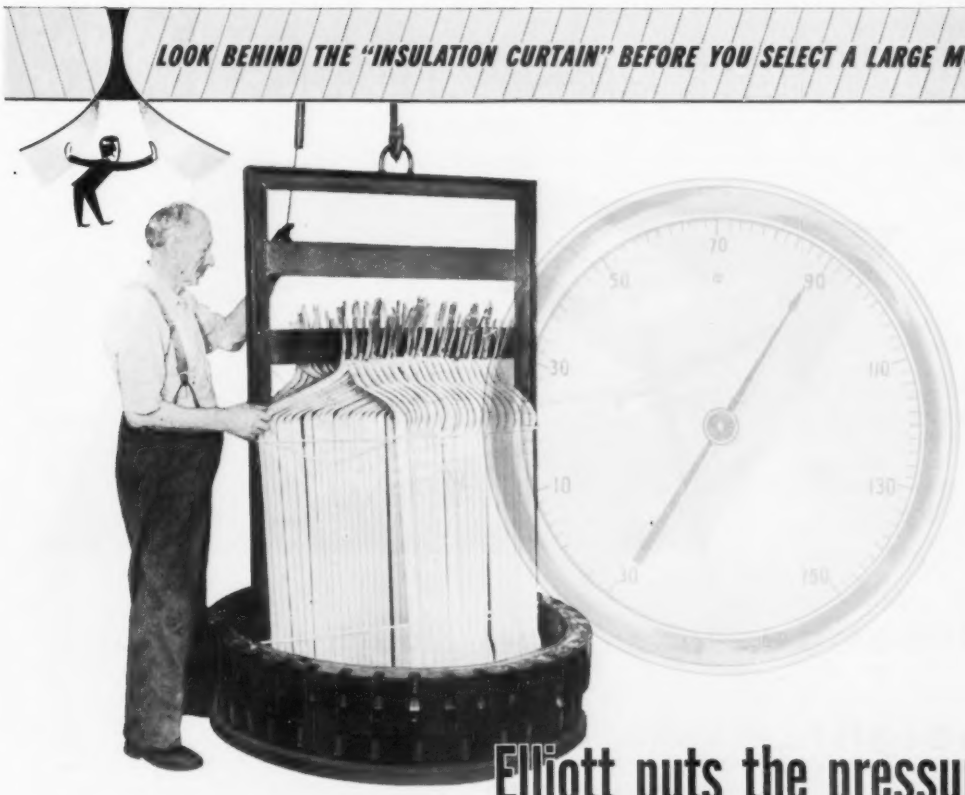


Ultrasonic testing of a weld on heavy wall pipe

Grinnell Company, Inc., Providence, Rhode Island • Coast-to-Coast Network of Branch Warehouses and Distributors

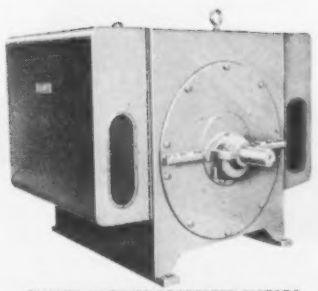
pipe and tube fittings • welding fittings • engineered pipe hangers and supports • Thermolier unit heaters • valves
Grinnell-Saunders diaphragm valves • pipe • prefabricated piping • plumbing and heating specialties • water works supplies
industrial supplies • Grinnell automatic sprinkler fire protection systems • Amco air conditioning systems

LOOK BEHIND THE "INSULATION CURTAIN" BEFORE YOU SELECT A LARGE MOTOR



# Elliott puts the pressure on for complete penetration insulation treatment

Good insulation *material* alone is not enough! It takes a sound application process and real craftsmanship to do a 100% coil insulation job. That is why Elliott is not satisfied with just "coating" or spraying stator coils with insulation varnish. Instead every (600 v through 4800 v class) Elliott Squirrel-Cage Induction Motor coil is placed in a tank and evacuated to remove air, moisture or solvents from the coil itself. Next a carefully selected moisture and acid-resisting varnish is pumped under pressure into the coils to assure complete penetration and the filling of all voids by the varnish. It's a complete, foolproof filling and sealing job and *one big reason why* Elliott weather-protected motors have set a record of seven years of service from coast-to-coast, under all sorts of atmospheric exposure, *without one failure*. Ask your Elliott field engineer to give you complete facts on large motor insulation or write Elliott Company, Ridgway Division, Ridgway, Pa. for the Coil Insulation Bulletin.

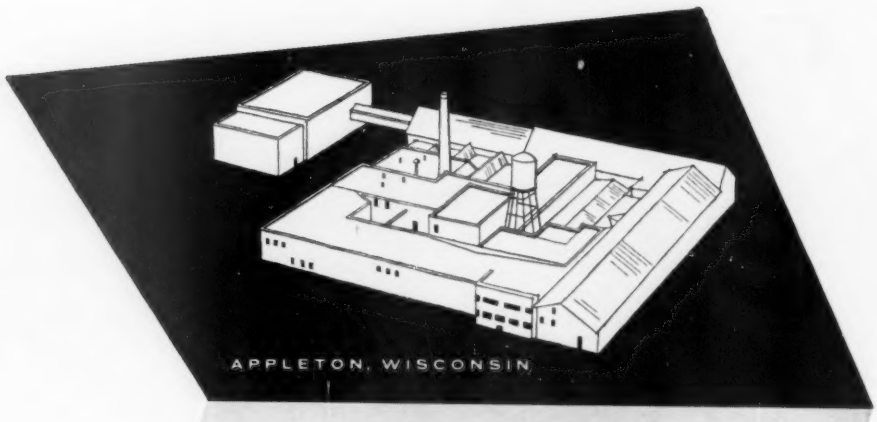


**ELLIOTT WEATHER-PROTECTED MOTORS**
Elliott squirrel-cage induction motors lead the field in insulation. Since 1948, out of 1,400,000 hp of motors with this insulation system, (installed in 42 states and 14 foreign countries) **not one stator coil has failed due to insulation breakdown or deterioration.**

RG-10

**ELLIOTT Company**

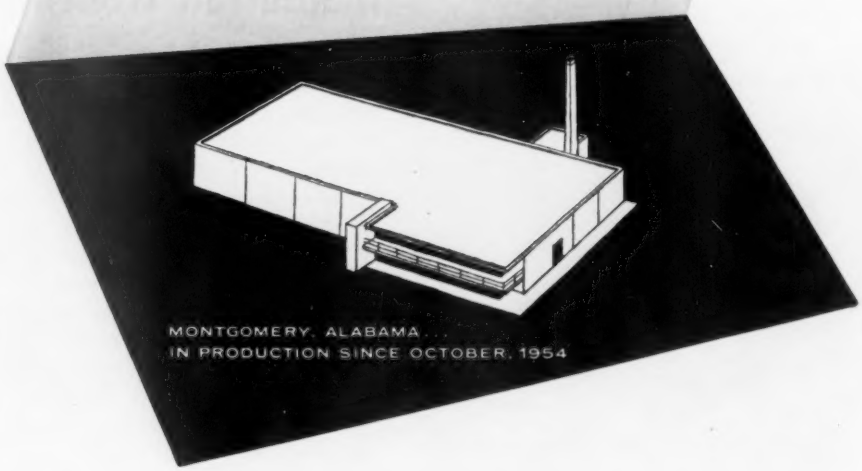
*Elliott large motor insulation is "field-proven"*



APPLETON, WISCONSIN

**Confidence**....in the paper industry

**Foresight**.....to anticipate changing conditions and requirements of the paper industry with new manufacturing facilities



MONTGOMERY, ALABAMA
IN PRODUCTION SINCE OCTOBER, 1954

**Appleton Wires are Good Wires**

Appleton Wire Works, Inc.
GENERAL OFFICES, APPLETON, WISCONSIN

# STRICTLY PERSONAL



## Far West Flashes

**C. R. P. (DICK) CASH,** resident manager, Fibreboard Products, East Antioch, Calif., vacationed in British Columbia with his wife who hails from Berney, B.C. . . . **JAMES H. MILES,** purchasing agent at East Antioch, finally fell to cupid's darts, being married recently in Las Vegas to Phyllis Lomonto, of Hollister, Calif. . . .

**JAMES McCOURT,** technical director of Crown Zellerbach, Camas, Wash., and his Texas-born wife, Martha, welcomed another addition to their family, Stephen, born July 16. Jim is son of **EARL (MICKEY) McCOURT,** veteran executive of Consolidated Water Power & Paper Co., Wisconsin Rapids, Wis. The James McCourts have two sons and two daughters, all born at Camas. . . . **WILLIAM R. BARBER,** who retired as research director of Crown Zellerbach some years ago, but now comes back to Camas for special tasks as special projects chemical engineer, has been adding grandchildren —he now has five of them.

**GERALD FRINK,** president of Washington Iron Works, Seattle, died on July 12 at age of 80. He was widely known in western forest industries. His father founded his firm in 1881. Other officers are **FRANCIS G. FRINK,** vice president, **JAMES H. FRINK,** vice president and general mgr., **PHILIP F. FRINK,** secretary, and **C. F. BRIDGES,** treasurer. . . .

**HARRIS FENN,** western manager for National Aniline, San Francisco, has been recovering from a recent illness that hospitalized him briefly at his Atherton, Calif., home, but is doing nicely. . . . **ANDY PERRIN,** western manager for Reliance Electric, San Mateo, Calif., and wife, Eileen, and two children, found time for a brief vacation in southern California. Ask Andy about the learned local Filipino waiter who out-quoted Shakespeare to him. . . . **GUS OSTENSON,** manager of the new Antioch mill of Crown Zellerbach, and his wife Bernice, have moved into newly built ranch type home there. They are liking the outdoor life and sun so much, they admit the rain bothers them a bit when they go to their haunts up north. . . .

**EDDIE CAVANAUGH,** technical superintendent at Fibreboard mill in East Antioch, Calif., helped celebrate his parents 50th anniversary in Auburn, Wash. Eddie also saw old friends at the Port Angeles mill. . . . **JOHN RONEY,** chief chemist at East Antioch, and wife, welcomed a baby son. They also have two daughters. . . .

**H. MCINTOSH BEATTY, JR.,** has been appointed technical service rep for Hooker Electrochemical Co., Tacoma, Wash. . . . **JOHN M. SUARDI** has been appointed sales engineer to head Graver Tank & Mfg. Co., Inc., San Francisco office, at 155 Montgomery St. Mr. Suardi had been Graver's field service engineer visiting installations across the country. . . . **DR. DOUGLAS W. GLENNIE,** formerly research assistant at Syracuse college of forestry, is named head of chemical research and development at Oregon Forest Products Laboratory, Corvallis, Ore., successor to **DR. E. F. KURTH** who transferred to Oregon State College department of chemistry. . . . **ERNST H. SCHWEITZ,** 63, chief engineer of Publishers' Paper Co., Oregon City, Ore., died July 14 at Portland hospital. Mr. Schweitz, born in Eksjo, Sweden, came to the United States in 1920 and worked at eastern and western mills before moving to Oregon City in 1934. . . . **R. O. LEE,** former public relations supervisor and advertising manager of Washington-Idaho area of Pacific Telephone & Telegraph Co., has joined Georgia-Pacific Co. as director of public relations and advertising at G-P's headquarters in Portland, Ore.

Executives promoted at Potlatch Forests, Inc., Lewiston, Ida.: **E. C. RETTIG,** former first assistant general manager, advanced to executive vice pres.; **ROY HUFFMAN,** assistant gen. mgr., **J. J. O'CONNELL,** manager-lumber div., **E. E. CYPERT,** manager-pulp and paper div., and **GEORGE RAUCH,** manager-lands and logging div., were named vice presidents. . . . **ROBERT W. OLIN,** formerly maintenance supt.-woods operations, has been named director of planning for Potlatch Forests, Inc. . . . **A. K. HINCKLE** is traffic manager for Potlatch Forests, Inc., having succeeded **WALTER WEISMAN,** retired.

**EDWARD TAYLOR,** former technical assistant to pulp mill superintendent at St. Helens mill, is product development engineer, new product development and sales, Crown Z headquarters. . . . **R. W. WALKER,** assistant office manager at CZ West Linn mill, is a director of Portland chapter of National Assn. of Cost Accountants.

Crown Z executives receive honorary law degrees—Occidental College honoring Pres. **J. D. ZELLERBACH** with its award and Westminster College presenting the degree to **E. J. SPIEGEL,** vice president of CZ and general manager of the Gaylord Div.

**EDWARD H. TIDLAND,** 67, for 18 years maintenance supervisor of CZ Camas mill, later with Pacific Coast Supply Co. and founder of Tidland Machine Co. which has manufactured pneumatic shafts since 1951, died June 30 at his Camas, Wash. home.

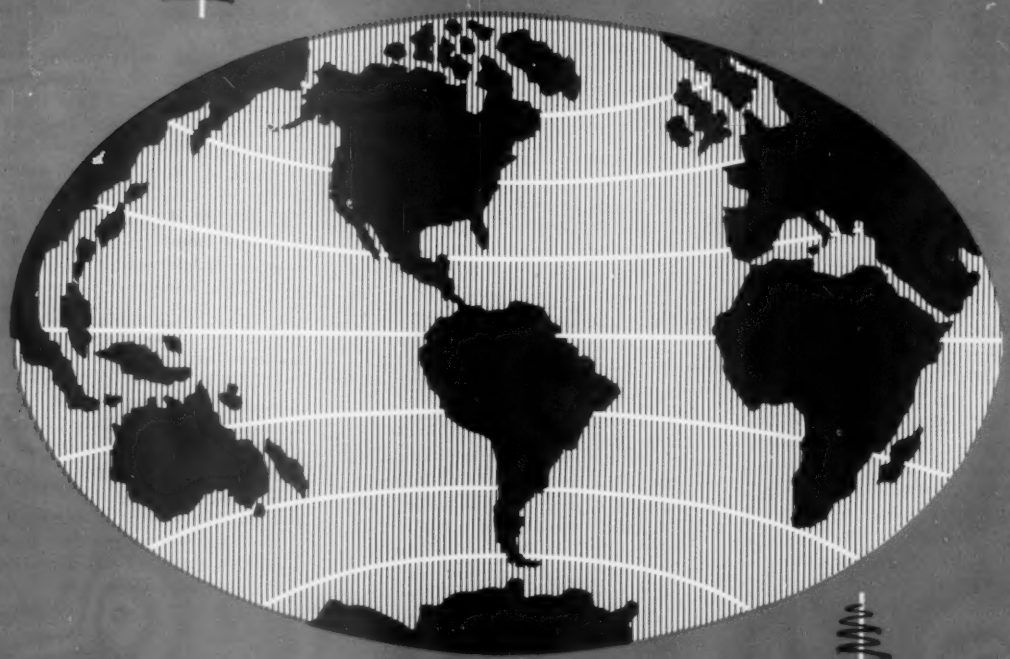
**ALBERT S. (STEVE) QUINN JR.,** now discharged from the army, has joined Stebbins Engineering Corp., Seattle. He is an engineering graduate of Santa Clara University . . . His brother, **JOE,** is with Pacific-Western Gear Works, Los Angeles. Their father, of course, is president of the western Stebbins firm. . . . **NORMAN HEGGLUND,** superintendent of wood preparation at Scott Paper Co., Everett, Wash., headed for Lynn, Mass., for a vacation with his son and family. The son is with General Electric in Lynn.



**Rhinelander Men Help Out New Mill**

Helping iron out usual startup problems of a glassine-greaseproof mill—the R-W Paper Co., Longview, Wash., owned jointly by Weyerhaeuser and Rhinelander—are these men from Rhinelander Paper Co. in Wisconsin (l to r): ROBERT KENNEDY, Asst. Paper Supt., JOHN KAY, Mgr. of Production Analyses and Service, and RHINEHOLD SEIDEL, Rewinder Supervisor. Mr. Kennedy has been at Rhinelander 42 years and in his present post for 28. Mr. Kay has been at Rhinelander 35 years and in his present post since 1938.Mr. Seidel is a 35 year man and supervisor since 1933. Bob Harper, Manager of the Longview mill, which started up in June, reported it had reached over 90% efficiency (accounting for all kinds of lost time, down time, etc.). Sulfite pulp and water are pumped 2,200 ft. underground from the Weyerhaeuser mill and steam and electricity by aerial cables. Picture by PULP & PAPER.

# WOOD PULP PAPER



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# STRICTLY PERSONAL

**BOYD K. WICKWIRE,** personnel manager of Longview Fibre Co., was recently named chairman of Cowlitz County's "Langlie for Senator" organization, the first one formed in Gov. Arthur B. Langlie's move to unseat incumbent Sen. W. G. Magnuson. . . . **J. R. CALLAHAN, JR.,** assistant kraft pulp mill superintendent at Weyerhaeuser Longview Pulp Div., promoted to assistant to Longview Pulp Div. Manager **E. N. WENNBERG** . . . **C. ERSKINE INGRAM** succeeds Mr. Callahan as assistant kraft pulp mill supt. . . . **JAMES S. BUSHING,** with Weyerhaeuser Pulp Div. engineering dept. since 1949, is named assistant plant engineer.

**CLIFFORD R. MAKI,** previously affiliated with Longview Fibre Co. and Stebbins Engineering, has joined Weyerhaeuser Longview Pulp Div. engineering staff, according to Plant Engr. **D. G. FELTHOUS.** . . . **EARLE RILEY** promoted to shipping and receiving supervisor at Longview Fibre Co. as successor to **MIKE PRICE,** retired. . . . **G. L. HOLLIMON** is pulp mill tour foreman at Longview Fibre Co. . . . **MAX BROWER,** supervisor of paper machine and beater room maintenance at CZ Camas, advanced to project engineer. . . . **W. E. PARKINSON,** superintendent of purchasing, storage and shipping, promoted to general superintendent of wood mill, finishing and services, CZ Camas.

**WARREN E. OLSON** has been promoted from supervisor of production planning at San Leandro converting plant to production planning department at Crown Z headquarters. . . . **DEAN O. BOWMAN,** coordinator of long-range planning for CZ, has been named a member of National Planning Assn's. business committee on national policy. . . . **LEONARD B. ZURCHER** becomes quality control chemist at CZ's St. Helens plant. . . . **H. W. THELLER** is promoted from supervisor of paper product development at CZ's Central Research Dept., to mechanical development engineer, new product development and sales, Portland office. . . .

**THOMAS SYME** has been promoted from assistant supt. to supt. of Western Kraft Corp., Albany, Ore. Mr. Syme reports to **HUGO TRYGG,** general supt. Mr. Syme came to Western Kraft in Sept. 1955, as technical director, from Ocean Falls, Canada. . . . **GEORGE AHLQUIST** was promoted to chief chemist from project chemist of Western Kraft. He came to Western Kraft from Longview Fibre Co., previously he was in Tomahawk, Wis., with National Container.

**PETE TARANOFF,** former technical assistant to paper mill supt. at CZ St. Helens plant, promoted to asst. supt. paper mill. . . . **ED TAYLOR,** technical asst. to kraft mill supt., CZ St. Helens, transferred to San Francisco headquarters on new product development staff.

## For Cosmopolis Mill

Weyerhaeuser Timber Co. names key personnel for new Grays Harbor MgO sulfite pulp mill under construction at Cosmopolis, Wash. for production start-up early next year: **JOE C. BROWN,** to be manager, was assistant manager Longview Pulp Div.; **C. S. WALSETH,** formerly of Longview research dept., moves north as research director; **HERMAN JORGENSEN,** sulfite shift foreman at Longview, will be pulp mill supt.; **WAYNE F. SCHUKNECHT,** named recovery and power supt., was assistant supt. of power at Longview; **ERWIN OLSON,** Longview project chemist, becomes chief chemist; **G. W. HOUGH,** previously on special assignment, will be chip plant supt., **GRATTON HALE,** formerly of logging and lumber divisions, is office manager; **D. D. WILSON,** becomes personnel manager, **D. J. BRULE,** storekeeper, and **ART CLICK,** instrument foreman.

## Staffing New Mill

With Crown Z's new Antioch 400-ton paper mill starting up in September, new staff men are now on the scene, carrying out their various assignments. They include (with mills, plants or offices they came from in parenthesis): **GUS OSTENSON,** resident mgr. (Camas); **TOM LEEDHAM,** asst. res. mgr. (San Francisco); **J. H. QUIGLEY,** supt. of paper production (Pt. Townsend); **LELAND F. MAYBACH,** plant engineer (Camas); **CHESTER T. BEALS,** asst. supt. of paper production (Camas); **DUDLEY CHURCH,** technical supervisor (San Francisco); **DEAN RITTER,** asst. technical supervisor (St. Helens); **L. R. MULLINEAUX,** steam plant supt. (Camas); **JOHN W. TILDEN,** purchasing agent (West Linn); **LYNN R. WILSON,** personnel supervisor (San Leandro); **GLEN F. LOFTUS,** office manager (Seattle); **LUTHER B. LYNCH,** asst. office mgr. (San Francisco); **R. W. ANDERSON,** master mechanic (West Linn); **EDWIN D. FRAZIER,** industrial engineer (San Leandro); **LEN R. GREGER,** electrical engineer (Camas); **WADE WETMORE,** bag plant supt. (San Leandro), and **LILLIAN BENTLEY,** secretary to res. mgr. (Camas).

## Southern Sidelights

Industry peddlers are chuckling over the story about the normally sourfaced boss who called his salesmen into a meeting one morning and greeted them with a wide smile and the announcement that he personally was going to supervise a gigantic sales contest. "What's the first prize?" asked an eager young staff member. "The winner," said the boss still smiling, "gets to keep his job" . . . And speaking of contests, a razor blade salesman could make a million at Brunswick Pulp & Paper Co. this month. Hardly a man in the mill has shaved in weeks, preparing for a beard growing contest which is part of the Centennial Celebration of Brunswick's first city charter (circa, 1856). The company magazine, **PINE CHIPS,** devoted two full pages and cover to some of the "smarter" models . . . And at Union Bag & Paper Corp. in Savannah, Ga., the company is sponsoring a safety contest among hourly paid workers. All they have to do is fill in a card and add a line about safety. Each week for 10 weeks the company will give away a 14-in. portable T-V set to the man whose card is drawn—and put safety first in the minds of its mill men.



**NEW TOP BRASS AT BOWATER'S CATAWBA MILL** are shown here getting to know their new neighbors from South Carolina. T. C. BANNISTER will be new mill manager and H. C. CURRUTH will be woods manager. Left to right are C. D. GREGORY, JR., Pres. of the Lancaster, S. C., Chamber of Commerce, Mr. Curruth, Mr. Bannister, JOHN A. HARDIN, president of the Rock Hill, S. C., Chamber, and Bowaters' vice pres. and gen. mgr. at Calhoun, K. O. ELDERKIN.

# Would you slice bread with a sword?



You could, but you would do a better job with a bread knife. Whatever the job, the right knife does it best! The right knife for your chipping operation is an "OK BATTLE AXE". It's especially designed to do the job best, to give maximum production of uniform chips with a minimum of sawdust and splinters.



Special high alloy steel, hardened in salt furnaces and carefully tempered, gives every "OK BATTLE AXE" blade its extra toughness, its extra-long edge life. To you, this means longer runs between grindings.

"OK BATTLE AXE" knives are made to customer's requirements and complete records are kept to assure exact duplication of original orders without delay.

Ohio Knife Co. field service men, experienced in chipping operations, can be sent to your mill to analyze your particular chipping problems and recommend correct tempers, bevels, etc. to best suit the job. No obligation, of course.

For complete information on "OK BATTLE AXE" Chipper Knives, write Dept. 49-F

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PULP & PAPER

# STRICTLY PERSONAL

**H. M. REED, JR.,** has been transferred from International's Southern Kraft division office in Mobile, Ala., to Springhill mill in La., as plant engineer. Mr. Reed started in the beater room, after serving as a captain and pilot in World War II, graduated as an electrical engineer from Clemson College and returned to I.P. as an engineer.

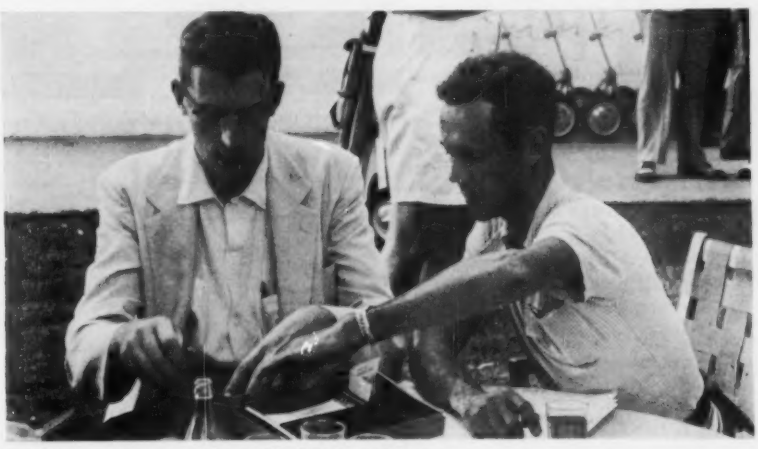
**W. J. BULL** has been named assistant general supt. of paper and board mfg. at Champion Paper and Fibre's Canton, N.C., mill, according to **H. A. HELDER,** vice pres. and general mgr. at Canton. Mr. Bull has been 19 years with the firm, starting as chemist. . . . **RICHARD E. DAVIS** has joined Champion at Canton as administrative assistant to **JOHN M. BARNES,** who heads community and industrial relations. Mr. Davis was with the Georgia Forestry Commission. . . .

**KARL R. BENDETSON,** v. p. and gen. mgr. in Texas for Champion, went on a special month-long mission to Europe as special assistant for German affairs for U.S. Defense Dept. . . .

**KARL R. BENDETSEN,** vice president and general mgr. Champion Paper and Fibre Co. Texas Division, has announced seven promotions at the Pasadena, Tex. mill. **R. L. BETTS** and **JOHN PARROTT** were named as assistant production managers; **ROY MEASE** was appointed general supt. of pulp mfg. and **HAROLD MORRIS** became general supt. of paper mfg. **G. A. JACKSON** manages the newly created purchase, storage and traffic dept.; **H. M. BURNETTE** assumes the post of assistant gen. supt. of the mechanical and power dept., and **R. P. GOODMAN** has taken over duties of division purchasing agent.

**ALFRED SUTER,** 67, mill manager, Gaylord Container Corp., Div. of Crown Zellerbach, Bogalusa, La., succumbed to a heart attack on July 14. A native of Switzerland, he came to Bogalusa in 1923 to become associated with the old Bogalusa Paper Co., predecessor of Gaylord Container Corp. Co-incident with the merger of Gaylord and Crown Zellerbach last Nov., Mr. Suter was elected vice pres. and dir. of the Gaylord Container Corp. div. of the merged company. **TED M. WILKIE,** formerly of St. Louis executive offices, becomes manager of Gaylord eastern div. at New York City. . . . **CHARLES L. MUELLER,** assistant manager of Gaylord Jersey City converting plant, moves to Gaylord general office at St. Louis as assistant to the vice president and treasurer.

**WILBER F. (GIL) GILLESPIE** has been promoted to general manager of the Bogalusa, La., mill division of Gaylord Container Corp., Zellerbach Corp., succeeding Mr. Suter. **VERTREES YOUNG,** president of Gaylord, announced the appointment. For many years Mr. Gillespie was Tech. Director at Bogalusa and more recently Asst. Gen. Mgr. He is former President of TAPPI.



**Michigan Papermakers Hold Fun Day**

Jointly sponsored by Michigan Superintendents and Kalamazoo Valley TAPPI, a Fun Day was held July 24 at Gull Lake Country Club, Kalamazoo. Nearly 300 papermakers and representatives of supply firms participated. NEIL PLANTEFABER (left), R. T. Vanderbilt Co., Kalamazoo, as Chairman, reported registration of 188 golfers and sales of 285 dinner tickets. DEAN GRAHAM (right), DuPont, Kalamazoo, was Assistant Chairman. Here they are counting the day's business. Winners of golf prizes were: Wayne Wilson, low gross; Lawrence Hallock, second low gross; Walter Shaw, low net; Ore Baker, second low net; Ward Shurtz, closest to pin on 15th green; Richard Dozier, longest drive; Ward Harrison, closest to fourth green pin; Paul Hieni, low putt total; Kenneth Rasmussen, high gross; and Duke Fleming, high hole.

## Midwest Medley

**ALFRED H. NADELMAN,** prof. and head of paper technology dept., Western Michigan College, has men from France, Germany, Texas, Maine, Oregon and other states in training on coated paper mfg. . . . **NEIL PLANTEFABER,** of Kalamazoo, Mich., who has been in the chemical supplies business serving pulp and paper mills in his area, has joined the staff of Minerals & Chemicals Corp. of America, serving under **OLIN CALLIGHAN.** . . . **E. F. (ERNIE) BLEW,** who has been in Niagara Falls, N. Y., for Hooker Electrochemical Co., has joined the Hooker staff under Midwest Mgr. **WILLIAM GILLESPIE** in Chicago, replacing **VIC MORGAN,** who returned to Niagara Falls. Mr. Blew will cover Wisconsin and Minnesota mills. . . .

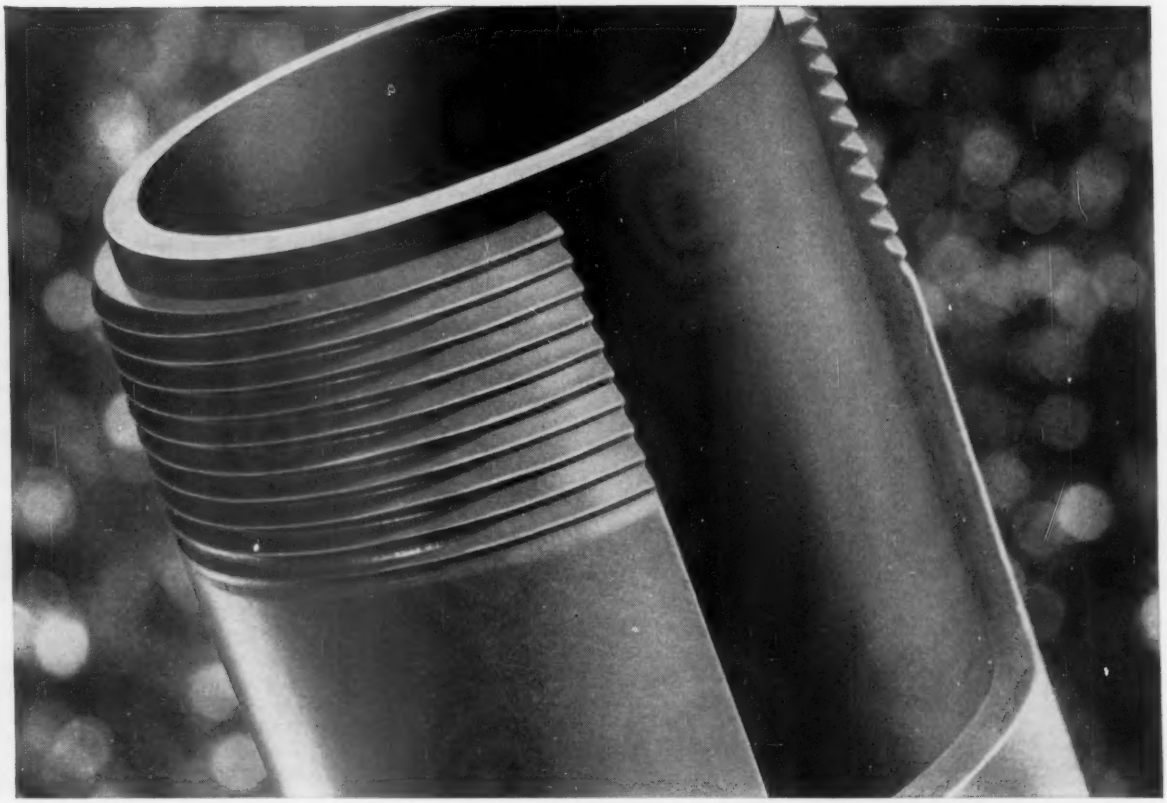
**BOB KENNEDY,** assistant paper mill supt., **JOHN KAY,** manager of production and analysis and service; **FRANK KICHEFSKI,** machine supervisor; **THEODORE MULLER,** calender dept. supervisor; **BILL DAVIS,** sales manager, and **RHINEHOLD SEIDEL,** rewinder supervisor—all from Rhinelander mill in Wisconsin—have been recently temporarily assigned to the new R-W Paper Co., in Longview, Wash., helping Manager **BOB HARPER** and his staff smooth out some rough spots.

**HORACE FREEMAN** recently retired as technical dir. of Consolidated Paper Corp., Ltd. He will continue as consultant, devoting his efforts to special projects. Prior to his association with Canada Power & Paper Corp., the predecessor of Consolidated, some 27 years ago, he had been active and still is in work of applied research in metallurgy and certain branches of pulp and paper.

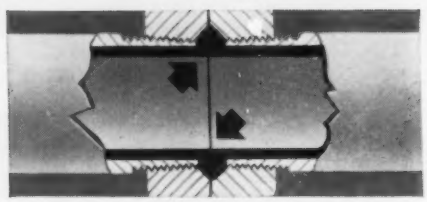
**EDITH STROSCHNEIDER,** 66, librarian emerita and editor of **Library Notes** of The Institute of Paper Chemistry, died June 29, following a short illness. She was born in Vienna, Austria, educated through high school there and later attended Studly Horticultural College in England. She emigrated to Canada in 1925, where she became technical librarian of two different paper companies. In 1931 she assumed duties of librarian at the Institute. . . .

**ROBERT D. JAMES** has been appointed director of special food board product sales, **S. B. WILLIAMS** named sales manager for the folding box plant and **W. R. TOBIN** promoted to sales manager for American Box Board's Grand Rapids, Mich., plants. . . . **P. M. CHIUMINATTO,** sec.-treas. of Charmin Paper Mills received the Lybrand award for his paper, "Is Direct Costing the Answer," at the National Assn. of Cost Accountants recent annual conference. At the same conference **EARL DIBBLE** of Charmin was elected pres. of the Northern Wisconsin Chapter. . . .

DOW



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Liquid never touches metal in saran lined pipe even at a flanged connection like this.

**It's made of corrosion-resistant saran swaged into rigid non-bursting steel . . . liquid never touches metal in these installations**

Here's your best way to convey acids, alkalies and other corrosive liquids—saran lined pipe, fittings and valves. This modern piping is corrosion resistant . . . forms snug, leakproof joints . . . is available for working pressures up to 150 psi. Fittings and valves are also available in steel for working pressures to 300 psi.

Installation costs are low with saran lined pipe, fittings and valves. Saran lined pipe can be cut and threaded in the field with available pipe-fitters' tools. Its rigidity means few supporting structures are needed.

Saran lined pipe has an outstanding record of trouble-free performance in the chemical, petroleum, waste, pulp and paper, metal finishing, and food processing industries. For further information send in the coupon at the right. THE DOW CHEMICAL COMPANY, Midland, Michigan.

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Dept. SP625B-1.

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*you can depend on DOW PLASTICS* DOW

PULP & PAPER

# STRICTLY PERSONAL

**DR. U. T. GREENE,** an executive of Diamond Alkali Co., Cleveland, O., has been appointed director of the Chemical and Rubber Div., Business and Defense Services Administration. . . . **ROBERT A. BINTZ** has been appointed plant manager of National Starch Products' Indianapolis plant and **GLENN K. SMITH** was made gen. supt., in charge of production and engineering. . . .

**WARREN A. LOGELIN** has been named dir. of public relations of Crane Co. He succeeds **RUSSELL G. CREVISTON** who retired. . . . **WILLIAM P. ORCUTT** has joined Wisconsin River Div., Consolidated Water Power & Paper Co., as mill chemist. . . . Congratulations to **CLARENCE KINGSTON,** Hammermill's paper mill supt., who recently turned his literary talents into a $200 award on an essay "Here's What I Want from My Work"—in annual contest sponsored by the John W. Bolton Co. . . .

**DR. JAMES A. BRALLEY** has been named dir. of research for A. E. Staley Mfg. Co., Decatur, Ill. He has been with Rohm & Haas Co. of Bristol, Pa., for the last 10 years and before that with B. F. Goodrich Co. as research chemist. . . . **RICHARD C. TEN EYCK** has been promoted to mgr. of Tank Lining and Industrial Rubber Covered Roll Sales dept. by Goodyear Tire & Rubber Co., Akron, O. He has been with Goodyear since graduation from Lehigh U. in 1949. He has served as field representative at Dallas, Tex., and more recently in Minneapolis.

Minnesota and Ontario Paper Co. announces today, through **PAUL A. MAHONY,** vice pres. in charge of sales, that **R. A. CAMPBELL** is promoted from sales manager to general sales manager, Paper Division; **J. V. OTNESS** from assistant sales manager to specialties sales manager, Paper Division, and **JAMES A. VAUGHAN JR.** from sales representative to newsprint sales manager, Paper Division.





**New Posts in Midwest**

JOHN FUKO (left) has been promoted to Mill Manager for River Raisin Paper Co., Monroe, Mich., succeeding Mel Knack. Mr. Fuko has been with the company 9 years, starting as Mill Chemist and more recent as Mgr. of Quality Control. GEORGE HAYNES (right), Pres. of George Haynes Co., is new sales and service rep for Hammel-Dahl Co. throughout western Missouri and northern Kansas.

## Notes from Northeast

**WILLIAM J. ELKINS** has joined the sales engineering staff of Sandy Hill Iron & Brass Works. He has been a sales engineer with Rice Barton Corp., for the past 3½ years and previous to that for Bagley and Sewall. He will service the New England area and part of New York. . . . **HENRY J. BARTELS, DUDLEY P. FERNANDES** and **KENNETH TRACEY,** chemical engineers, have been appointed job leaders in the process study dept. of Hooker Electrochemical Co., Niagara Falls, N. Y. . . . **ROBERT F. LANE,** assistant to the president of Fischer & Porter Co., has been made a member of the company's board of directors. Mr. Lane has been with the Hatboro, Pa. instrument manufacturer for 13 years. . . . **H. W. BACON** of Concord, Mass., has been appointed asst. sales mgr., Industrial Div. of Tracerlab, Inc. In his new position Mr. Bacon will be responsible for Tracerlab's industrial sales offices in New York, Cleveland, Chicago, and Sherman Oaks, Calif. . . . **J. DONALD GEORGE** has been made asst. dir. of mfg., headquarters at Plainfield, N. J., for National Starch Products.

**ROBERT J. CASEY** has been named div. mgr., Paper Clays Div., Industrial Products Dept. of J. M. Huber Corp. He will be in charge of sales of coating and filler clays and other coating pigments to paper mills throughout the U.S. and Canada. His asst. div. mgrs. will be **A. L. FULLER** and **C. A. RABY,** all headquartered in New York.

**WILLIAM H. SCHOCKLEY,** formerly product development engineer of CZ's new product development and sales, San Francisco headquarters, joined West Virginia Pulp and Paper Co. as technical supervisor of Tyrone and Williamsburg, Pa. mills. . . . **JOHN M. WALSH,** manager of Paper Chemicals Dept. of American Cyanamid Co., New York, completed 40 years with that company on July 12.

**WALTER A. LITTLEFIELD,** manager of budgets and costs, Brown Co., moves from Boston to Berlin, N. H. as special assistant to technical director. **LAWRENCE M. BURNS,** production manager, pulp division, has resigned to be mill manager and assistant to the president of Thurso Pulp & Paper Co., at Thurso, Que. . . . **LAWRENCE F. WHITTEMORE,** chairman; President **A. E. HAROLD FAIR** and Vice Presidents **STUART W. SKOWBO, ROBERT W. ANDREWS** and **C. S. "PAT" HERR,** recently hosted 24 financial analysts who came for a close look at Brown Co's. mills and woods operations. Mr. Whittemore also recently spoke at a luncheon of the N.Y. Security Analysts Society.

**HOWARD T. REUNING,** New York and Pennsylvania Co., Inc., is chairman of the Pennsylvania State Pollution Abatement Committee. He is supervising waste engineer of New York and Penn's pollution control system at Johnsonburg. **TOM WILLIAMS,** assistant superintendent at Lock Haven, is busy supervising construction of his new home at Lock Haven.

**PAUL W. HOREYSECK,** manager of American Coating Mills Division's board mill at Middletown, O., is now superintendent of the board mill of Gair Cartons Div., Piermont, N.Y. He's a grad of the U. of Maine and has been with Gair 11 years. **HENRY G. BOOTH** becomes assistant supt. of the Thomas River board mill. **JAMES C. HODGETTS** is new training supervisor for Gair plants, according to **GEORGE B. GREENWOOD,** vice president, industrial relations . . . **JAMES F. PRIMM** has joined Celanese Corp. of America as general export sales manager, headquartering in New York.

**BOB HULSIZER,** power supervisor, New York and Pennsylvania Co., Inc., is new president, Industrial Supervisor's Club, Clinton County. **HENRY MELLINGER,** NYPEN safety supervisor, is secretary. Mr. Hulsizer is also president of new Clinton County Engineer's Society. **NEIL M. BARBER** is now Philadelphia district sales manager, Hooker Electrochemical Co.

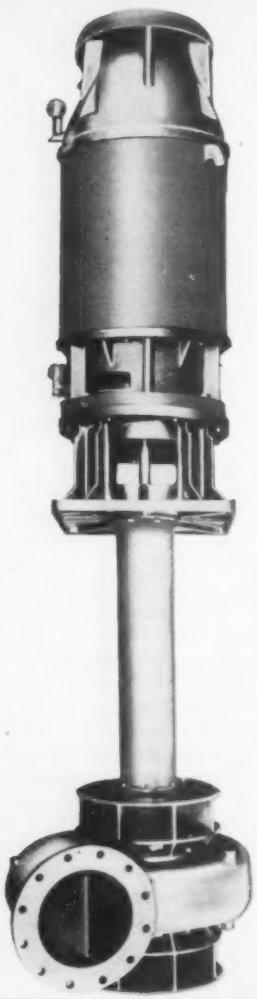
**W. N. WILLIAMS,** president, Westvaco Mineral Products Div., Food Machinery and Chemical Corp., recently received a 1956 Research Institute Award for Merit for "effective contribution to development of executive skills." Award was for company's maintenance training program.

**JAMES J. ROGERS,** who recently resigned as vice president of J&J Rogers and Co., Ausable Forks, N.Y., has joined Brown Co. as assistant to President **A. E. HAROLD FAIR.** Mr. Rogers is a Cornell U. grad with a degree in m.e. . . . **MARY BARBARA REINMUTH,** advertising manager, Fraser Paper, Ltd., recently received a National Journalist Award for one of her series of "These Trees Shall Be My Books" featured in "The Voyageur," Fraser's external house magazine. Award was in Washington and given by the West Coast lumber industry.

# Bingham

## TYPE "VS" DOUBLE SUCTION DOUBLE VOLUTE VERTICAL PUMP

# SPECIALLY DESIGNED FOR PULP AND PAPER MILL SERVICE...CANNOT BECOME AIR-BOUND OR CLOGGED



## REQUIRES ONLY MINIMUM-SIZE WET PIT

Bingham Type "VS" Pumps are being used as standard equipment throughout the Pulp and Paper Industry for handling stock, white water, water supply, disposal sump and other high capacity, medium head services. The vertical "VS" Pump requires only a shallow sump of minimum dimensions, permitting installations to be made on the same floor with flat screens, deckers, washers, save-alls, etc.

The "VS" Double Suction Pump has large suction openings and specially-designed impellers to handle air-entrained white water or stock without becoming air-bound or clogged.

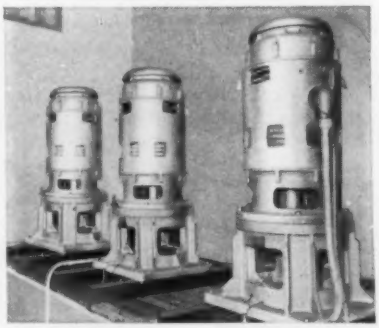
The "Double Volute" design of Bingham VS Pumps insures radial balance of the rotating element throughout the entire operating range of the pump. This feature prevents wear of rotating parts due to the elimination of shaft deflection usually caused by "SIDE PUSH".

The "Double Suction" feature of this pump eliminates axial hydraulic thrust thereby permitting the use of standard vertical motors.

For complete information call your nearest Bingham office, or write for brochure 110.

**Outstanding features of the Bingham "VS" Pump:**

1. Will not become air-bound.
2. Will handle stock without clogging.
3. May be installed at convenient locations in mill flow line.
4. Operates successfully in basements or on any floor level.
5. Eliminates need for secondary dump chests.
6. Substantially reduces building costs.



Battery of Bingham Type VS, "Double Volute", Double Suction, Wet Pit Pumps handling 36 million gallons of white water per day from flat screens located on the same floor level in a large West Coast pulp mill.

Bingham SINCE 1921

DOUBLE VOLUTE PUMPS RADIAL BALANCE

**BINGHAM PUMP COMPANY**

*General Offices:* 2800 N.W. Front Avenue, Portland 10, Oregon

*Factories:* Portland, Ore. • Vancouver, B. C., Canada

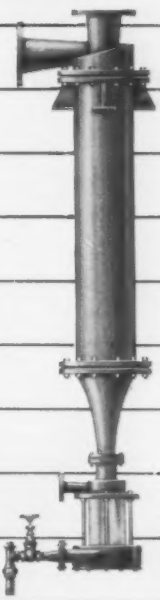
**SALES AND SERVICE OFFICES**

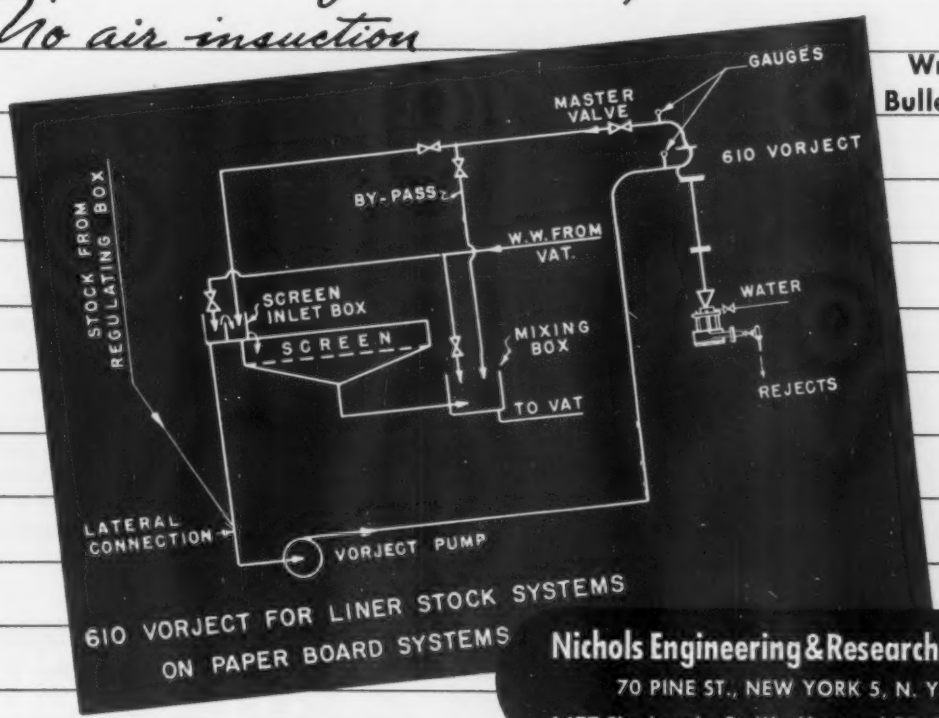
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NEW ORLEANS, LA.
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PHILADELPHIA, PA.
PITTSBURGH, PA.
SAN FRANCISCO, CALIF.
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# Blueprint...for a clean liner stock

## the 610 VORJECT® Trade Mark Cleaner

1. High cleaning Efficiency
2. Simple layout & operation-one unit for the average cylinder vat
3. Increased screen capacity
4. Low fibre loss (5lb./ton maximum)
5. Complete control of type of rejects
6. Stainless steel construction
7. Economies-stock upgraded-more production-fewer washups
8. No air insuction



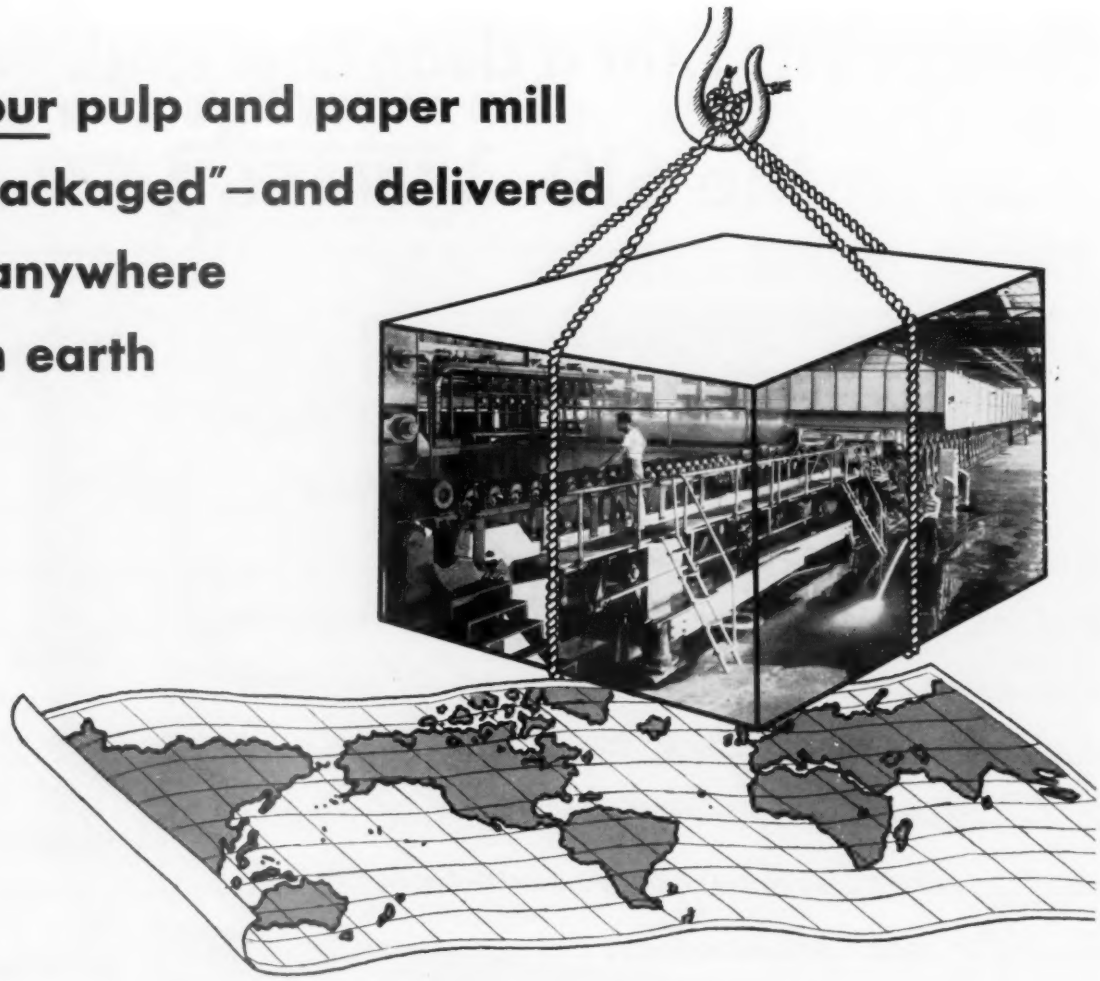



610 VORJECT FOR LINER STOCK SYSTEMS ON PAPER BOARD SYSTEMS

Write for Bulletin "M"

**Nichols Engineering & Research Corp.**
70 PINE ST., NEW YORK 5, N. Y.
1477 Sherbrooke St. W., Montreal 25, Canada

# Your pulp and paper mill "packaged"—and delivered —anywhere on earth



We are now building Mexico's first newsprint mill. This $12 million cooperative venture of Mexican, Canadian and U. S. interests at Tuxtepec, State of Oaxaca, will produce 30,000 metric tons of newsprint per year from Mexican pine —half the annual newsprint requirements of Mexico—with machinery manufactured by our affiliated companies.

Behind this concept of "packaged" paper mills stands our world-wide organization with over 100 years of experience in pulp, paper and machinery. We are equipped to render you *any or all* of the following services:

1. Conduct a preliminary technical and economic survey and prepare an appraisal report.
2. Engineer the complete project in cooperation with the world's leading consulting engineers.
3. Produce and deliver all the pulp and paper machinery and other necessary equipment that cannot be produced in the country where the mill is to be built.
4. Supply the necessary trained personnel to assure proper operation of the project until local workers can take over.
5. Assist the local group to obtain financing within the currencies available in the particular country, such as dollars, sterling, francs, D-Marks, Finn-Marks, etc.
6. Assist the local group to obtain the necessary raw materials and chemicals to operate the mill after it is built, as well as sell the output through Parsons & Whittemore's own offices.

Our book—"Growing with the Paper Industry Since 1853"—will give you more information on our ability to handle any pulp and paper mill project through all of the necessary steps from inception to completion or any combination of responsibilities that best suits your interests. Write for it without obligation.

**THE PARSONS & WHITTEMORE / LYDDON ORGANIZATION**

*World Leaders in the Development of Pulp Mills for the Use of Bagasse, Straw or Other Vegetable Fibres*

**250 Park Ave., New York 17, N. Y.** **35 New Bridge St., London EC4, England**

# Conveyor Belts...





## By the foot...

just 60 feet of new U. S. SteepGrade belting (on this Travelift, Phelps Manufacturing Co., Van Nuys, Calif.) helped *triple* the daily hauling capacity of this California roofing company.

## By the mile...

world's longest wood pulp conveyor system (Weyerhaeuser Timber Company, Everett, Washington) utilizes two-and-a-half miles of U. S. Giant® conveyor belting.

Regardless of the size of belt—regardless of the job—regardless of the location—your reliable supply point is the nearest U. S. Rubber District Sales Office.

Complete belting service, expert splicing, belt engineering and conveyor design help, and the most complete line of materials handling belts—all are yours without delay.

The "U. S." belting engineer will show you the unique "U. S." belt kit which enables him to custom-build a miniature sample—right before your eyes—of the right type and size belt for your requirements.

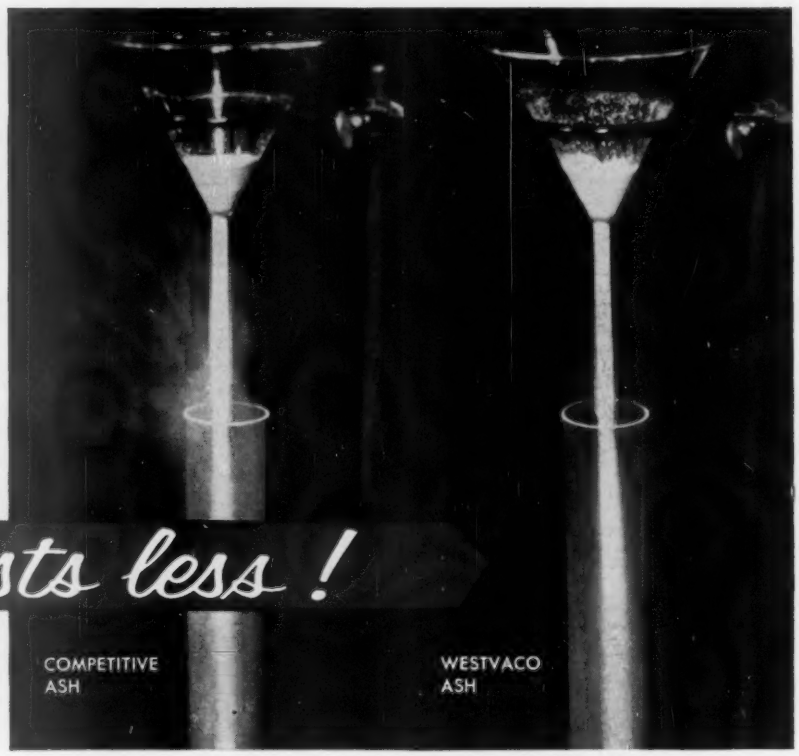
Contact any of the 28 strategically located "U. S." District Sales Offices, or write us at Rockefeller Center, New York 20, N. Y.

Mechanical Goods Division

**United States Rubber**

Westvaco®

# SODA ASH... *better because*




## *it dusts less!*

"Handsome is as handsome does".

Users tell us that WESTVACO Soda Ash dusts less. The camera confirms their practical experience. We believe you'll do so, too.

So if chemical purity, speed in dissolving, clarity of solutions, unusual flowability and less dusting are what you want, you'll find them all in WESTVACO Soda Ash.

Give or take a reasonable distance, our shipping territory is the Mississippi Valley to the Panhandle to the Pacific. To users in every industry thereabouts, we offer exceptional quality at regular price. Interested?

Westvaco® CHEMICALS

**Westvaco Chlor-Alkali Division**
**FOOD MACHINERY AND CHEMICAL CORPORATION**
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fmc FOOD MACHINERY AND CHEMICAL CORPORATION

FMC CHEMICALS INCLUDE: BECCO *Peroxygen Chemicals* • WESTVACO *Alkalis, Chlorinated Chemicals and Carbon Bisulfide* • NIAGARA *Insecticides, Fungicides and Industrial Sulphur* • OHIO-APEX *Plasticizers and Chemicals* FAIRFIELD *Pesticide Compounds and Organic Chemicals* • WESTVACO *Phosphates, Barium and Magnesium Chemicals*

# The Beloit Album

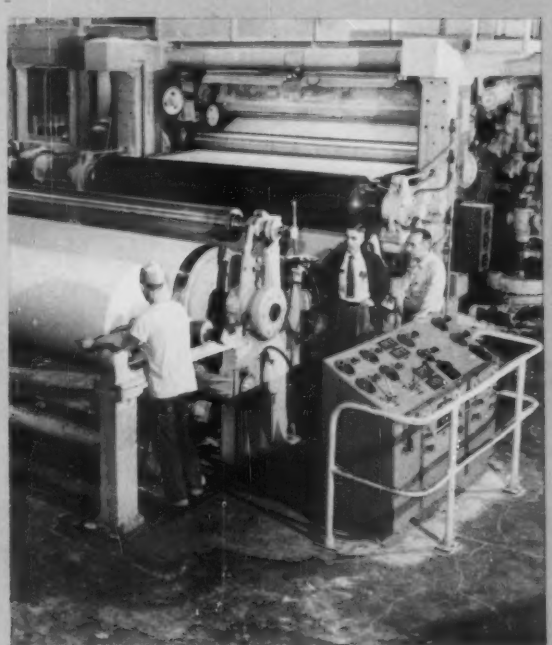
**Papermaking progress as seen by the Beloit camera's roving eye**



**DESIGN DISCUSSION** at Beloit Iron Works, Beloit, Wisconsin, includes *(left to right)* John Huppler, Kimberly-Clark Corporation, Charles Campbell, Coosa River Newsprint Company, Freeman Nichols and George Lundstrom of Kimberly-Clark. They are shown discussing the design of Coosa's new wide high-speed news machine with Sterling Skinner *(center)*, Beloit's Assistant Chief Engineer.



**GEORGIA KRAFT COMPANY's** Master Mechanic Jack Frost *(left)*, and Plant Engineer Dick Gallop *(center)*, during a recent visit, stop on Beloit's main Erecting Floor to examine slice arrangement on a secondary head-box with Beloit General Welding Foreman Howard Rosenow.



**STERLING PULP AND PAPER** Company's mill Superintendent, A. W. Mierow *(center)* and Chief Engineer C. E. Bieber *(right)* at reel position of Sterling's new 133" Tissue Machine. Pneumatic reels maintain desired nip pressures, preserve bulk and crepe throughout roll build-up.



**MOSINEE PAPER COMPANY**'s General Superintendent Robert Rusch *(r)* examines a centrifugally cast heavy wall stainless steel rectifier roll. Mr. Rusch is with Fred Erbach *(c)*, Beloit Sales Engineer, and Charles Petrof, Chief Inspector.



**OPERATION OF MOTOR DRIVEN RIDER ROLL** and slitter assembly for Beloit Model "L" winder is explained in detail to visitors from South America *(left to right)* Mr. Heinonen and Mr. Petaja by Beloit Sales Engineer Paul Pringle.

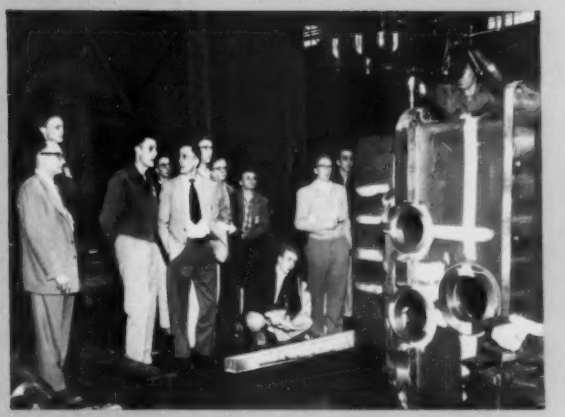
## Visitors Welcome

Visitors are always welcome at Beloit Iron Works. Pictures of some of our recent guests appear on these pages. While the majority of our visitors are customers, here to talk over design details, we also have the pleasure of meeting with other interested parties —students, heads of corporations, technical groups, and the like. We at Beloit feel that personal contact is essential. It's one of the most pleasant parts of our job—meeting old friends, making new ones, talking over specific problems, and in general helping to make Beloit more truly "your partner in papermaking."

## Foundry Expansion

Below is a view of the Beloit Iron Works Foundry most visitors do not see. Photographed from the Rock River side, the structure reveals the scope of Beloit's foundry expansion program, 1956. At far right is framework for the enlarged main foundry bay, the new dryer and roll-casting shops, and the corebox storage area. In the foreground is the new coreroom which will be occupied by the time this issue of the Beloit Album reaches you. Foundry expansion, including new melting, molding, and sand system facilities, will be completed by fall. This project will provide 100,000 additional square feet of foundry space, more than enough to offset the demand for castings created by the machine shop expansion.





**A TOUR GROUP** of 100 Junior Mechanical Engineering students from the University of Wisconsin seemed to find much of interest on a recent visit to Beloit Iron Works. Group above has stopped at a six-foot radial drill to watch the drilling of a five-size differential drive gear case.



**MEMBERS OF THE YOUNG PRESIDENTS** Organization and their wives recently visited Beloit Iron Works. Shown in the plant *(l. to r.)*: Mr. and Mrs. A. H. Lambrecht, Mr. and Mrs. A. W. Adams, Dr. Miller Upton, President of Beloit College, guide T. M. Jones, and Mr. and Mrs. Robert Rice.



**VISITORS** from the Madison Chapter, American Welding Society, stop in Beloit's Dryer Shop to examine a 60-inch paper dryer. The Welding Society visited Beloit for a first-hand view of advanced welding techniques used by Beloit in the manufacture of modern papermaking machinery.



**FOUNDRY OPERATIONS** are a high point of any shop tour. Tappi members standing on the foundry balcony get a bird's-eye view of the pouring of a 60-inch paper dryer. More than 200 members of the Lake States Chapter of Tappi visited Beloit, from mills in Ill., Mich., and Wis.



**VISITOR FROM FINLAND,** Erkki Berner, Manager of Enso Gutzeit's Summa mill, and Beloit Sales Engineer A. G. Olson *(left)*, examine a cheeking piece similar to one on new Summa news machine. Beloit has built six papermaking machines for Enso Gutzeit since the end of World War II.

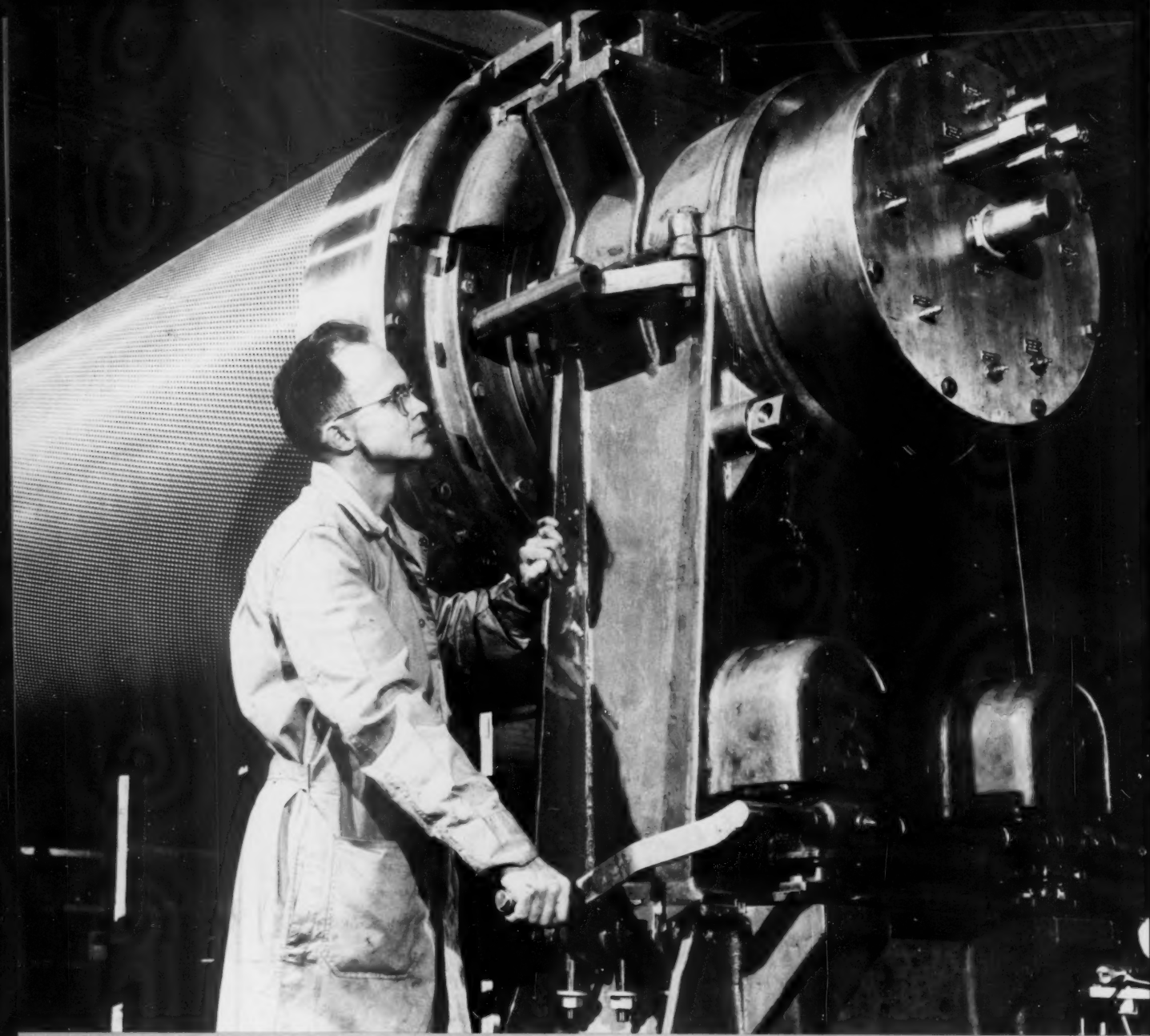
*your partner in papermaking*

# BELOIT

## PAPER MACHINERY

BELOIT IRON WORKS · PAPER MACHINERY · BELOIT, WIS. U.S.A.

*WHEN YOU BUY BELOIT..YOU BUY MORE THAN A MACHINE*



J. W. MILLER

**20-TON LIFT.** Ira E. Williams, night foreman, Suction Roll floor, checks the front-end lifting arrangement on a 44-inch diameter suction couch roll. Front-end lifting is a new method of cantilevering these rolls. The operator raises the tending side by simple mechanical means, and a spacer block is inserted between the rear couch journal and a jack-stand to hold the couch in its cantilevered position. Beloit introduced the revolutionary cantilever-type suction couch roll more than a quarter of a century ago. Continuous efforts to improve design, precision, and efficiency of operation have made possible trouble-free, high-speed, profitable production records. Front-end lifting is another development in Beloit's continuing program to improve design for better service to the pulp and paper industry. *Beloit Iron Works, Beloit, Wisconsin—Since 1856.*

*your partner in papermaking*

# BELOIT

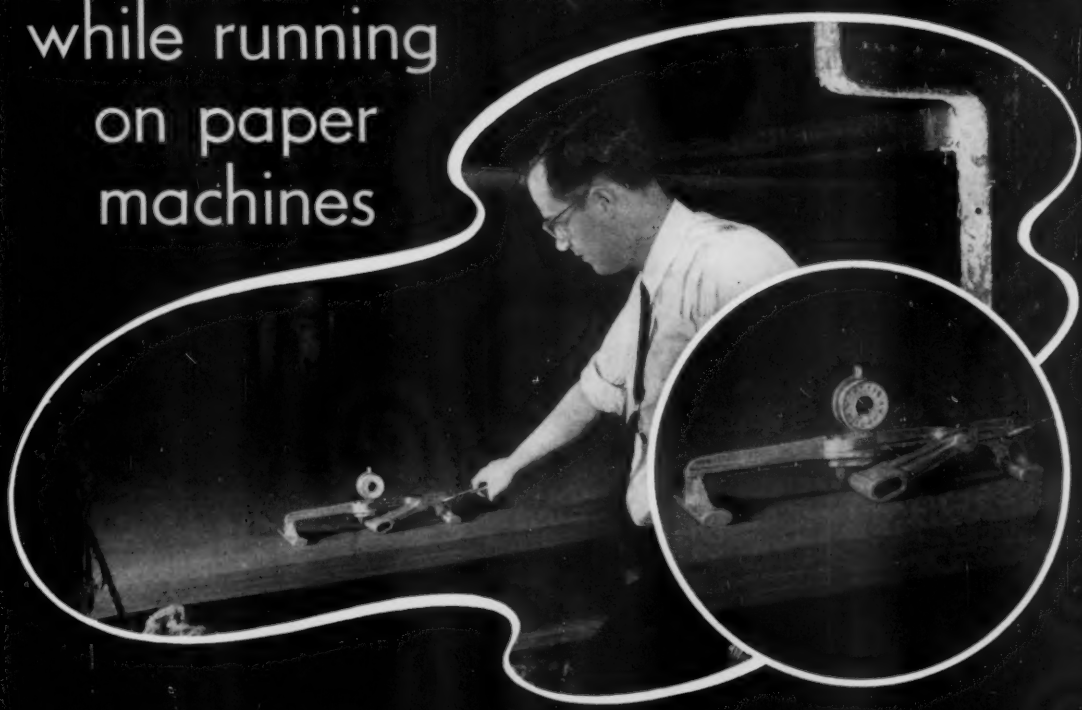
## PAPER MACHINERY

BELOIT IRON WORKS · PAPER MACHINERY · BELOIT, WIS. U.S.A.

*WHEN YOU BUY BELOIT . . . YOU BUY MORE THAN A MACHINE*

## another HUYCK *FIRST* in felt operation ...

# REMARKABLE *New* HUYCK-METER measures *TENSION OF FELTS* while running on paper machines



Already famous for its many *firsts* in felt-making, Huyck engineering now comes forward with still another development — the remarkable new HUYCK-METER. Widely tested for more than two years, this precision instrument — exclusive with Huyck — provides the most accurate known means of measuring tension in felts while running on paper machines.

In the experienced hands of your Huyck Field Service Engineer, the HUYCK-METER accurately determines the degree of tension which permits proper openness and maximum life. Moreover, it provides a means of running all felts at a predetermined tension.

Equally important . . . the HUYCK-METER enables Huyck to furnish precision fitted felts that are more uniform, better operating and longer lasting.

Only your Huyck Field Service Engineer is equipped with a HUYCK-METER. He will be glad to apply it to felts in your mill . . . to accumulate and analyze data that will help you produce better paper at lower felt cost per ton.

**NEW! HUYCK FELTS**

*FIRST IN QUALITY... FIRST IN SERVICE*

F. C. HUYCK & SONS • Established 1870
Rensselaer, New York • Aliceville, Alabama
Peterborough, New Hampshire • Cavendish, Vermont
IN CANADA: KENWOOD MILLS LTD.
Arnprior, Ontario • Established 1918

THIS




Mettler PRECISION BALANCE

+

THE NEW TARING DEVICE

=

GREATEST EASE, SPEED AND PRECISION!

12 TO 20 WEIGHINGS PER MINUTE

| TYPE NO. | CAPACITY | PRECISION | TARING RANGE |
|---|---|---|---|
| K-4 | 4000 g | ± 0.3 g | 500 g |
| K-5 | 2000 g | ± 0.2 g | 500 g |
| K-7 | 800 g | ± 0.03 g | 100 g |

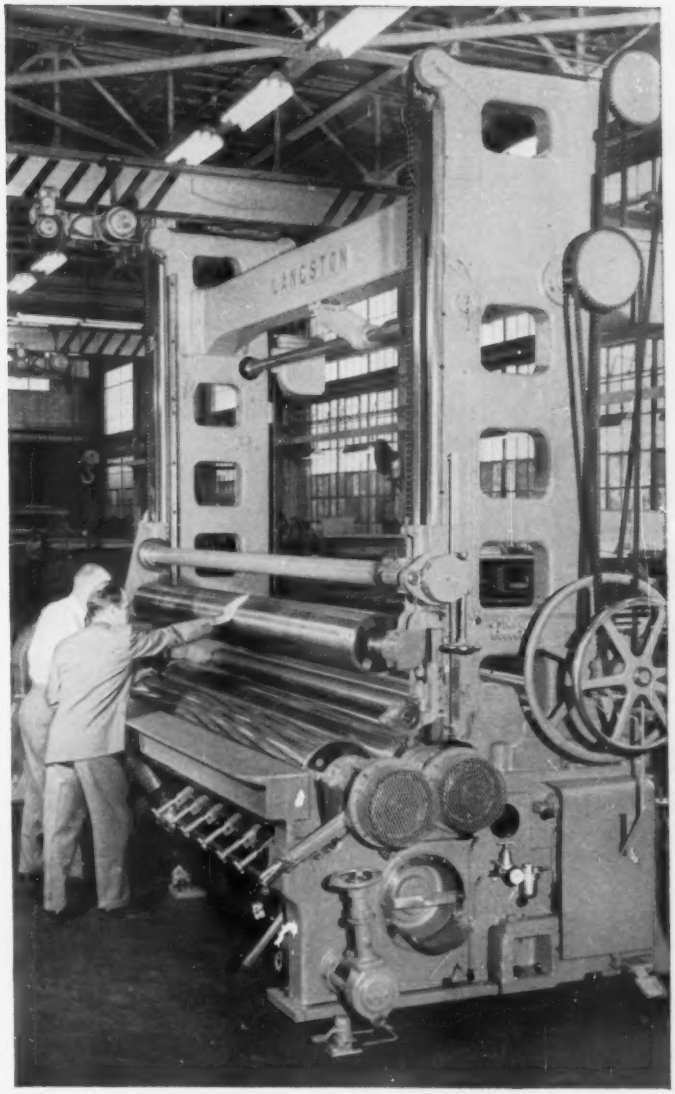
Write us today for our new booklet describing the precision balances. Ask us to arrange for a demonstration in your laboratory.

Mettler

INSTRUMENT CORPORATION

BOX 242, HIGHTSTOWN, N. J.

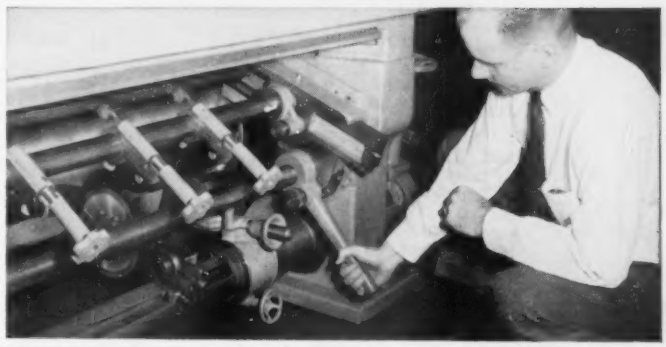
# Model DA **Langston Slitter & Winder** has 2-way control of roll density




The rider roll on this high-speed Langston Slitter & Winder does more than merely provide pressure. Extra tensioning effect can be added simply by adjusting a friction clutch between the rider roll and the overspeed drive. This adjustment is variable according to the needs of the particular paper being wound.

Tensioning effected by the overspeed of the rear main drum is adjustable by varying the pitch of the sheaves on the drive side of the machine. This adjustment provides simultaneous control over the speed of the drive to the rider roll. Tension can be further controlled within close limits by any of a variety of different braking systems on the unwind stand.

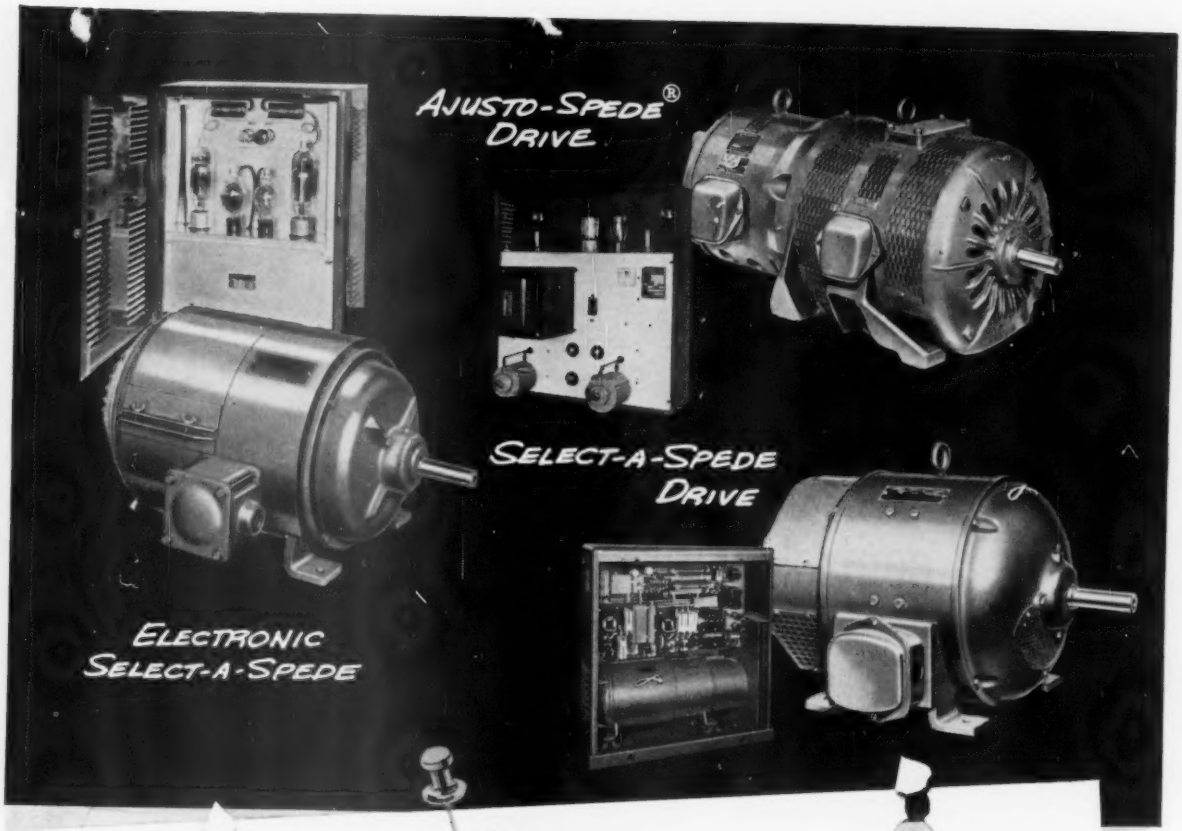
Langston Slitters & Winders feature the famous shear-cut slitters as standard equipment on all machines. Sturdy bedplate and side frames assure stability at all speeds. Optional features include hydraulic roll ejector, roll drop, and hydraulic roll actuator. Sizes to 196 inches wide and speeds to meet your requirements. Write for information. SAMUEL M. LANGSTON CO., CAMDEN 4, N.J.



**Reverse winding** is optional and available on all Langston Slitters & Winders, Models B, C and D. Photo shows man raising lever to set spreader bar on Model DA machine for reverse winding.

**LANGSTON** *Leadership...by design*

SHEAR CUT CLEAN CUT




# *Is your adjustable-speed drive problem different?*

## ...then it will pay you to look to Louis Allis for the best solution

There are several reasons why it pays to come to us with your adjustable-speed drive problems.

First of all, we have no axe to grind. We can recommend the proper drive for your needs because we make them all. There's no compromising.

Secondly, when you turn your problem over to us, we tackle the whole job . . . assume the entire responsibility.

And finally, we have more than just drives to offer . . . we have engineering and manufacturing experience. We've already solved a lot of drive problems. That's why we can tell you what you need, no matter what kind of machine you have.

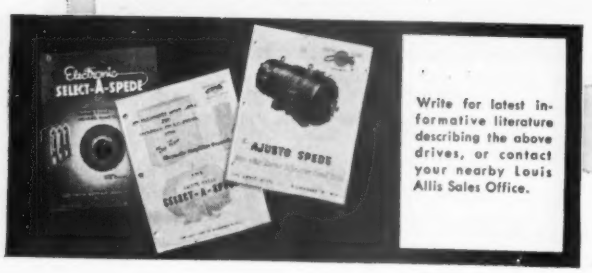
And here are the drives that can do the job for you:

Ajusto-Spede® Drives. 1 to 75 hp. Constant torque with up to 10:1 continuous speed ranges available. Infinitely adjustable eddy current clutch drive.

Select-A-Spede Drives. 1/2 to 400 hp. 8:1 constant torque speed range with magnetic amplifier control. Adjustable speed DC drive motor built in any enclosure.

Electronic and Static Select-A-Spede. 3/4 to 15 HP DC adjustable speed drive motor with speed ranges up to 100:1 and regulation to 1/2%.

See your Louis Allis field engineer or write and tell us about your problems. There's no obligation.




Write for latest informative literature describing the above drives, or contact your nearby Louis Allis Sales Office.

ASD-102

**THE LOUIS ALLIS CO.**
MILWAUKEE 7, WISCONSIN



# What a difference COLOR makes!

**Color actually does have** a psychological effect on people. It may not suddenly change our salesgirl friend (in the picture) into a wrapping expert. But a distinctive color does help give a store a personality all its own.

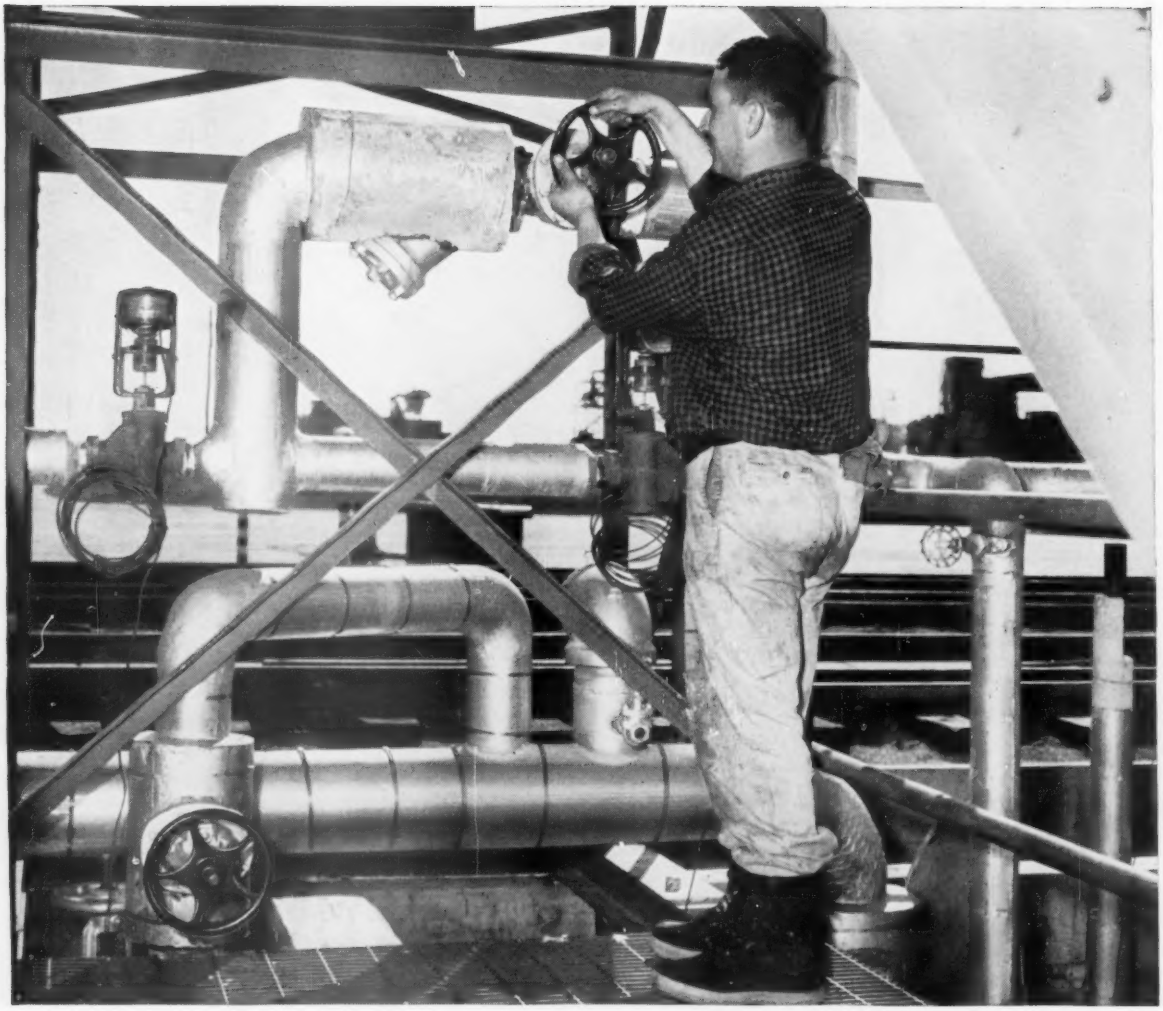
More and more businessmen are looking for their own store color . . . they know that every bright package on the street is a walking advertisement. Sell these new color-conscious customers. If you have a specific shade in mind, or would like to sell a new, unusual one . . . if you'd like expert advice on the most economical formulations or just the general know-how of a skilled technical staff, call on us. We'll be glad to help. Write E. I. du Pont de Nemours & Co. (Inc.), Organic Chemicals Department, Dyes and Chemicals Division, Wilmington 98, Delaware.

***Color sells more . . . for your customers and you***

DU PONT

# Du Pont Dyes

**BETTER THINGS FOR BETTER LIVING . . . *THROUGH CHEMISTRY***



# His job is to wash tank cars . . . not to contaminate them

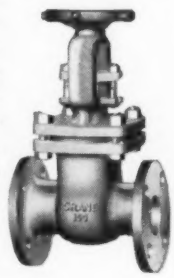
Even a good washer can contaminate a product tank car unknowingly—it all depends on the valves in the washing system.

But that doesn't happen at the Memphis emulsifiers plant of the Atlas Powder Co.

Here, Crane 18-8 SMo stainless steel valves are preventing corrosion and resultant iron pickup from getting into aluminum or stainless steel cars in washing. Such impurities could mean a lot of spoiled product when the cars are loaded.

After more than a year's service on hot detergent solution, the Crane alloy valves show no corrosive effects, and there's no record of damage from iron contaminants. With no maintenance whatever, the valves continue giving positive flow control.

New Crane alloy valves are helping all types of process industries with better flow control and higher contamination corrosion resistance at low cost. They offer many service features that can't be duplicated. Get full information from your local Crane Representative or write to address below. Ask for circular AD-2080.



**CRANE VALVES & FITTINGS**

**PIPE • KITCHENS • PLUMBING • HEATING**

*Since 1855—Crane Co., General Offices: Chicago 5, Ill. Branches and Wholesalers Serving All Areas*

*for superior wet strength . . . for lasting wet strength*




# SCRIPTITE* 33

*A new Monsanto melamine-type resin*

All the advantages of melamine resins as a source for wet strength have been incorporated into Scriptite 33.

Scriptite 33 provides unusually durable wet strength which is not appreciably weakened even under excessively moist conditions over long periods of time.

The use of Scriptite 33 increases dry tensile strength and wet rub resistance. It improves dry Mullen, wax pick, freedom from lint . . . adds internal sizing.

Scriptite 33 produces a paper with excellent dimensional stability and strong fold endurance.

Note: Scriptite 33 has been proved non-toxic and papers treated with melamine type resins have been accepted by Food & Drug Administration for food packaging.

For laboratory samples of Scriptite 33 and technical bulletin, write to Monsanto Chemical Company, Plastics Division, Room 923, Springfield 2, Mass.

*SCRIPTITE: REG. U. S. PAT. OFF.

MONSANTO

*The Monsanto Line of Paper Resins also includes*

**SCRIPTITE 54** . . . *for outstanding water resistance and both wet and dry rub resistance*

**SCRIPTITE 52** . . . *in combination with formaldehyde to give water resistance to folding boxboard and to jute liner*

**SCRIPTITE 50** . . . *for unsurpassed printability and improved surface characteristics on boxboard*

**SCRIPTITE 40** . . . *a urea type wet-strength resin*



*Your food products customers will welcome this new way to protect flavor and aroma--*

# IONOL®, C.P.

## ...impregnated paper and boxboard combats surface rancidification

Rancidification is the mortal enemy of flavor and aroma. When fats and oils migrate from food products to box or wrapper surfaces, they rancidify quickly. Results: deterioration of quality; reduced shelf life; consumer dissatisfaction.

Now there is an *effective new way* to solve this troublesome problem... one that will be welcomed by manufacturers of baked goods, cereals, meals, shortening, packaged meats, butter, and similar products. Ionol,C.P. antioxidant — incorporated into the boxboard or wrapping materials in which products are packed—provides long-lasting protection against rancidity by effectively preventing oxygen attack on fats.

In actual tests, baked goods were stored at 85° F in Ionol,C.P.-impregnated boxboard cartons, which were found to be free of rancidity at the end of ninety days. Without Ionol,C.P.-antioxidant protection, packages of baked goods stored under similar conditions often develop rancidity within a week.

**Be among the first to offer your customers this new, effective packaged foods protection. Write for: "Ionol, C.P. for Impregnating Paper and Paperboard."**

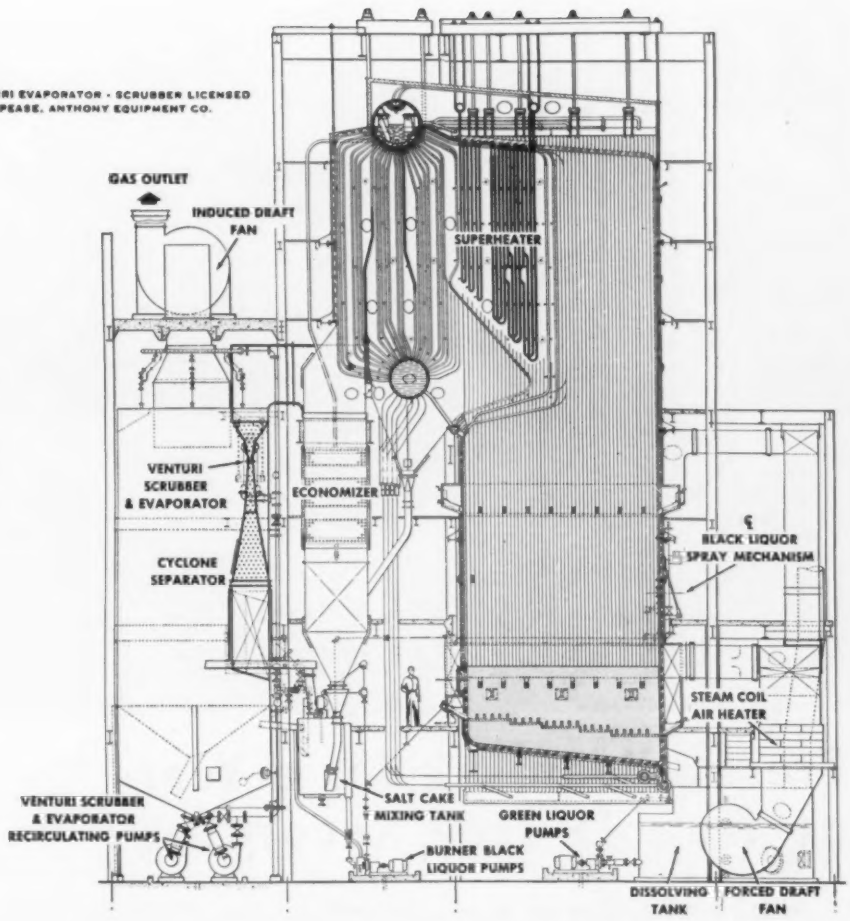
**SHELL CHEMICAL CORPORATION**

**CHEMICAL SALES DIVISION, 380 Madison Avenue, New York 17, New York**

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IN CANADA: Chemical Division, Shell Oil Company of Canada, Limited • Montreal • Toronto • Vancouver

SHELL




# POTLATCH FORESTS, INC. Install a B&W Recovery Unit with

## Venturi Evaporator-Scrubber

This B&W black liquor recovery system was installed at Potlatch Forests, Inc., Lewiston, Idaho in November, 1955. It includes a B&W Venturi Evaporator-Scrubber, an unusual feature which combines in one piece of equipment both the concentration of black liquor and the collection of salt cake fume.

The complete dependability and unusually high efficiency of the unique Venturi feature have been fully proved in service in many installations, some with operating periods up to three years.

The B&W Unit at Potlatch has a capacity of 300 pulp tons per day and is designed for 141,400 lb of steam per hr, at 650 psi and a total steam temperature of 750 F. Additional B&W Recovery Units in varying capacities, and equipped with Venturi Evaporator-Scrubbers are now on order for other pulp and paper mills.

B&W can help you choose a recovery system that has the right combination of features for your mill conditions. The Babcock & Wilcox Company, Boiler Division, 161 East 42nd Street, New York 17, N. Y.

**ADVANTAGES of the**
**B&W Venturi Evaporator-Scrubber**

Simple to operate
Low in First Cost
Increases Overall Thermal Efficiency
Reduces Maintenance Requirements
Continuous, High, Fume Collection Efficiency
Minimum Space Requirement
Reduces Multiple-Effect Evaporator Load

**BABCOCK & WILCOX**

BOILER DIVISION

P-796



# It's in the Bag!

## Fresh, Clean Ink for a Year of Trouble-free Recording

★ You won't have any messy, time-consuming re-inking of pens on the new Bailey Recorders. The entire system is white-glove clean—hermetically sealed, non-evaporating, non-corrosive. Gone is any chance of sludge or oxide formation. Gone are clogged pens, interrupted records, unsightly splashes.

The transparent plastic ink sacs are changed once a year—that's all. Capillary tubing carries fresh, clean ink to the pens continuously without any day-to-day attention.

This exclusive new inking system* is only one of the many time-saving, money-saving distinctive features of the new Bailey Recorder.

Ask for Product Specification E12-5.

P34-1

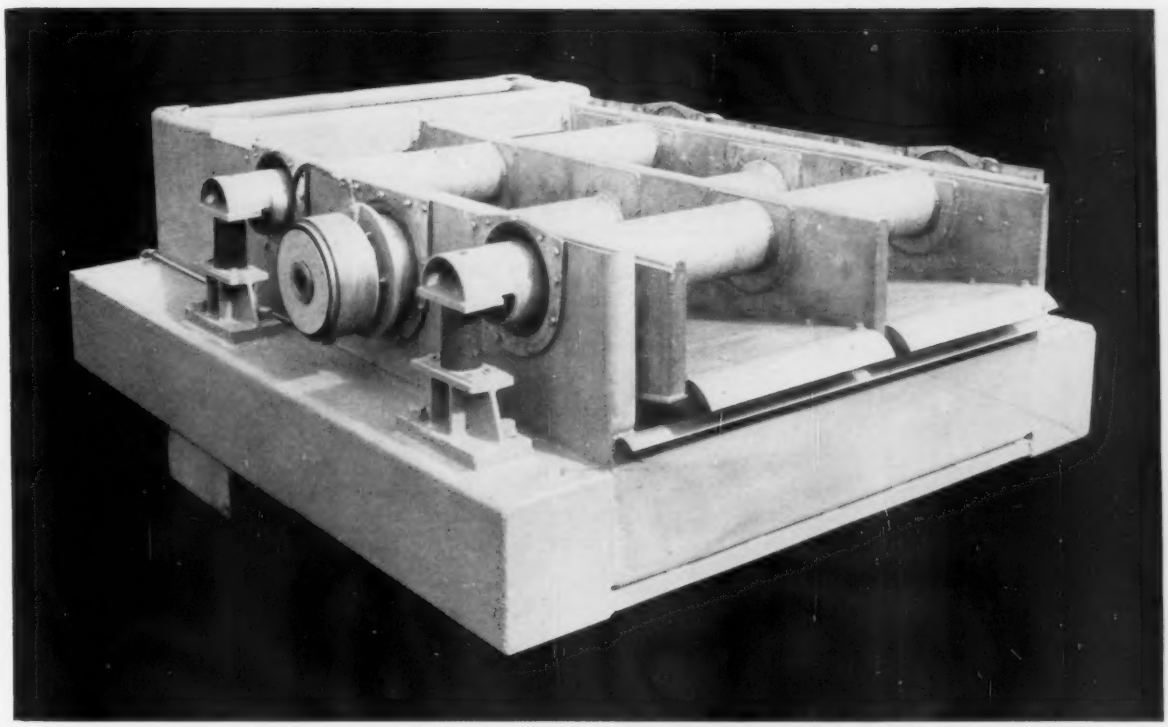
*Now available for the New Bailey Recorder only.

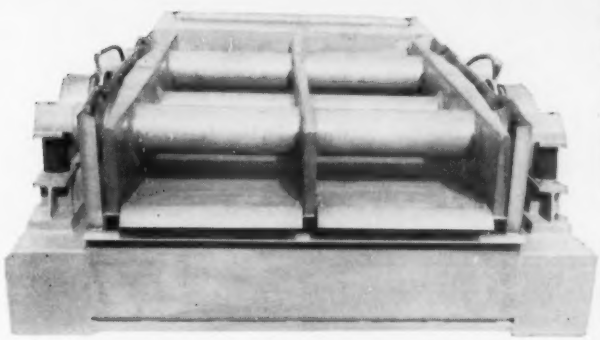
**ONLY BAILEY OFFERS ALL THESE ADVANTAGES IN A SINGLE RECORDER**

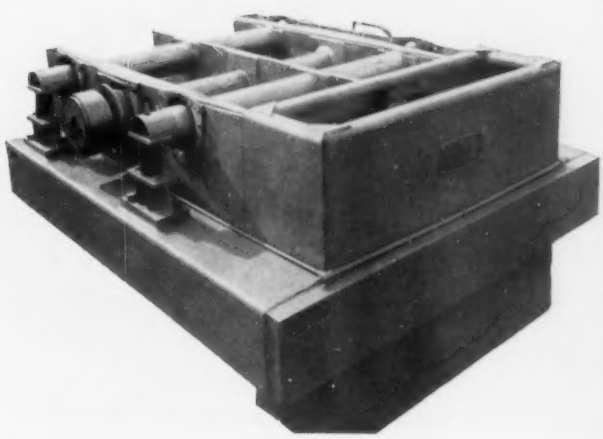
- Pre-calibrated plug-in receiver units
- Up to four pneumatic or electronic receivers —or two receivers and two integrators
- Any four variables on one chart—easily read and interpreted
- A full year's ink supply at one loading
- Faster ordering—from stock
- Minimum inventory of parts
- Minimum instrument investment for process cycle expansion or alteration

**BAILEY METER COMPANY**
1037 IVANHOE ROAD
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*Controls for Power and Process*

BAILEY METERS
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TEMPERATURE
PRESSURE
GAS ANALYSIS
FLOW · LEVEL
RATIO · DENSITY







# IMPCO VIBRATORY KNOTTER

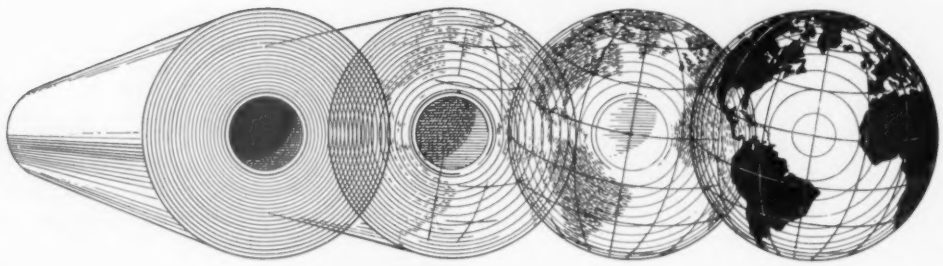
Here is a unit which contains several new features never before incorporated in knotters. Double wall construction of the stainless vat and center section guarantees extra long basket life. Rubber mounts support the vibrating basket as well as the vat itself, eliminating old-fashioned springs as well as minimizing vibration transmission to the building members. The built-in inlet box lends itself to subfloor piping as does the discharge. Six sectionalized screen plates are advantageous in that plate changes for various fibre clarifications are easily made. Oil mist lubrication, proper seals, and flinger rings protect the antifriction bearings against water, cooking liquors, and hot vapors.

Largest plate area is in keeping with present day peak capacities.

**IMPROVED MACHINERY INC.**
**NASHUA, NEW HAMPSHIRE**

**In Canada,**
**Sherbrooke Machineries Limited,**
**Sherbrooke, Quebec**

**SELL**
**THE WORLD**
**WITHOUT**
**"EXPORT PROBLEMS"...**



**THROUGH**

**CNC**

You'll have no "export problems" when you broaden your sales for world-wide business through Central National Corporation. Here's why:

- Price, quantities, and time of shipment are up to you. Your sales to CNC are domestic sales.
- CNC not only finds the right overseas buyers for your products, but handles all export details such as government regulations, steamship arrangements, and many more.

Whether it's in pulp, paper, paperboard or newsprint, CNC is organized to make it easy for you to build important, lasting sales overseas. Our representatives in 55 leading world markets stand ready to make the right connections for your products. *Contact us today.*

**CENTRAL NATIONAL CORPORATION**

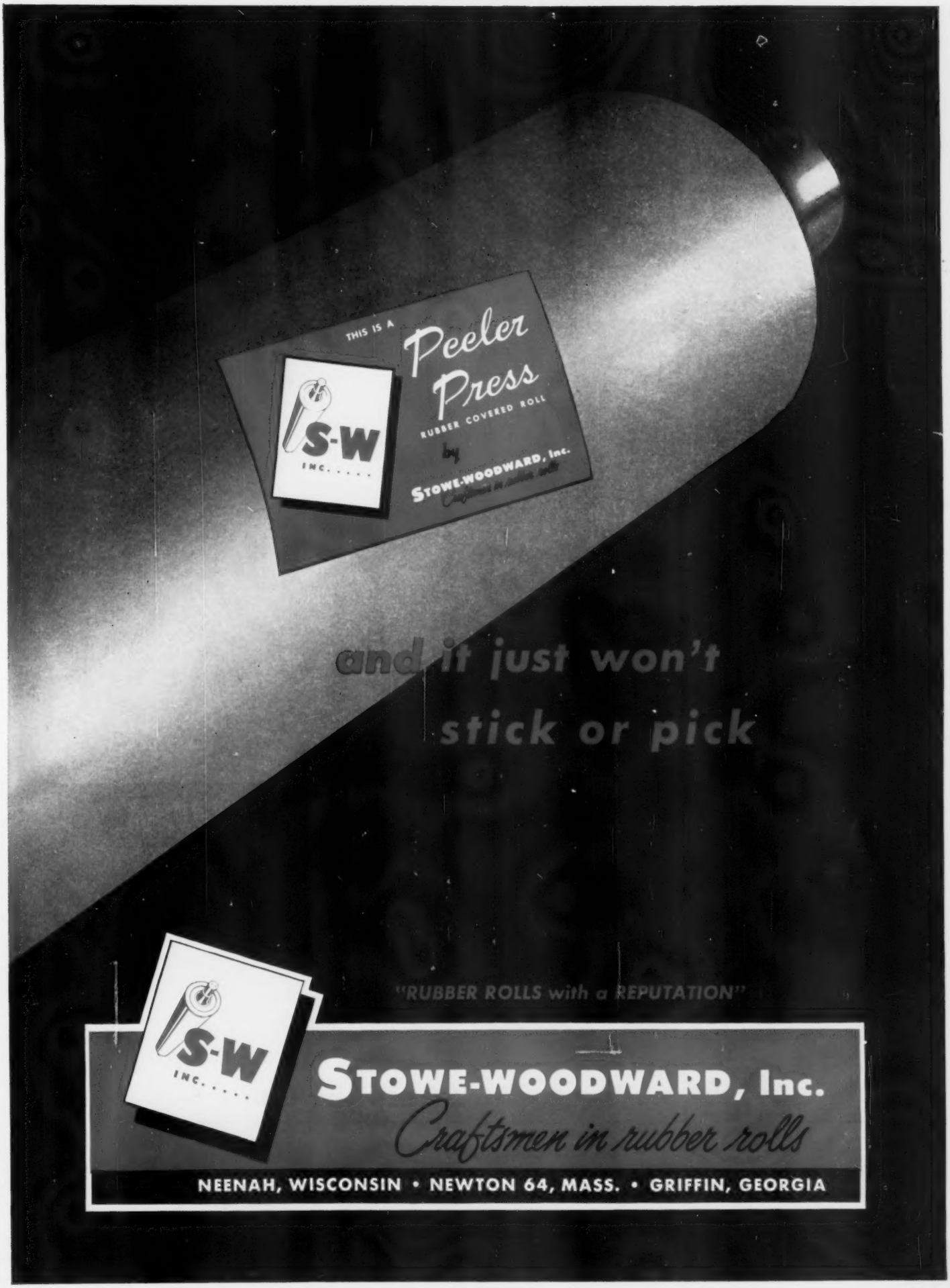
PAPER EXPORT CNC

PULP EXPORT CNC

**100 Park Avenue, New York 17, N. Y.**

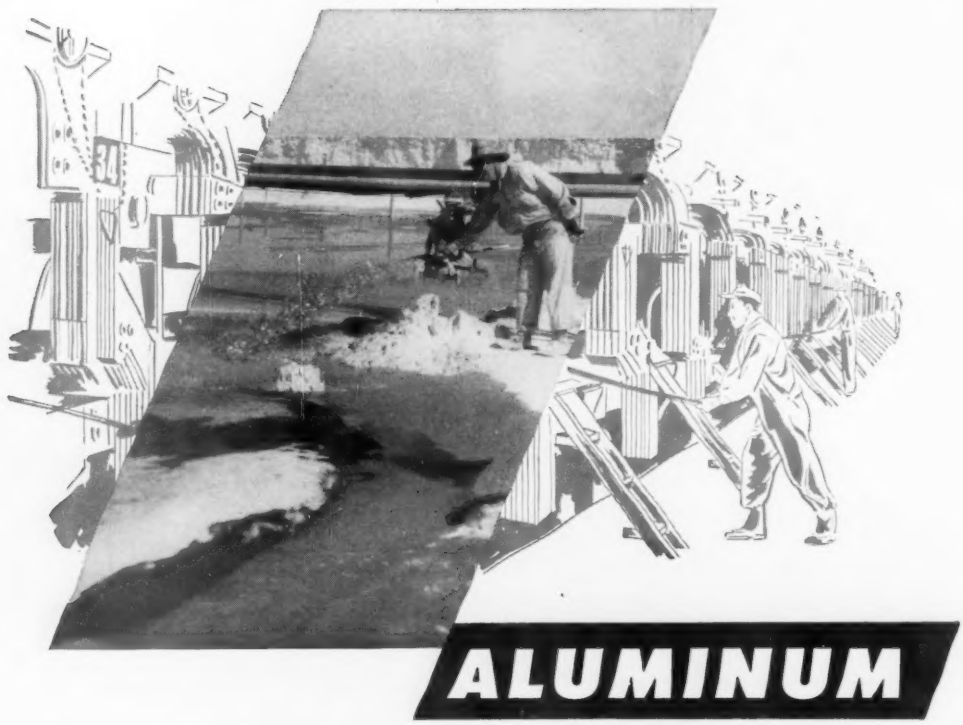
*A member of The Gottesman Organization*

*70th Anniversary* ESTABLISHED 1886


THIS IS A
Peeler Press
RUBBER COVERED ROLL
by
STOWE-WOODWARD, Inc.
S-W
INC.
and it just won't
stick or pick
"RUBBER ROLLS with a REPUTATION"
S-W
INC.
STOWE-WOODWARD, Inc.
Craftsmen in rubber rolls
NEENAH, WISCONSIN • NEWTON 64, MASS. • GRIFFIN, GEORGIA

# Sulphur

## helps to create headline products



**ALUMINUM**

Surely a 'headline product' even if not new! Aluminum is very much in the news today for it is playing a leading role in our steadily expanding economy.

What's all this got to do with Sulphur?

It's like a chain reaction. Demand for this remarkable light metal is increasing. This calls for more ore development and additional mills for the reduction of alumina to aluminum. More cryolite is needed for fluxing the molten alumina in the electrolytic cells.

True, cryolite ($Na_3AlF_6$) is found in nature but there just isn't enough tonnage to satisfy its many uses. So, to fill the supply gap, cryolite is being synthesized from fluorspar. It is here that Sulphur enters the picture, for one of its widely used derivatives — Sulphuric Acid — is a key reaction agent.

**Texas Gulf Sulphur Co.**

75 East 45th Street, New York 17, N.Y.
811 Rusk Avenue, Houston 2, Texas

Sulphur Producing Units
- Newgulf, Texas
- Moss Bluff, Texas
- Spindletop, Texas
- Worland, Wyoming

# Modern Chip Cooking by

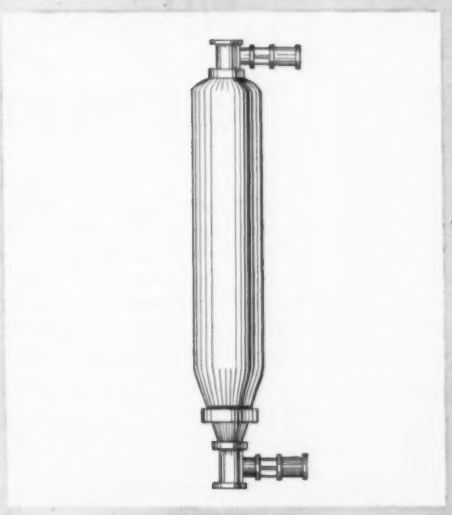
# Bauer

## for today's paper and board products

Now the Bauer Line includes equipment for processing pulp from the raw chip to the paper or board machine.

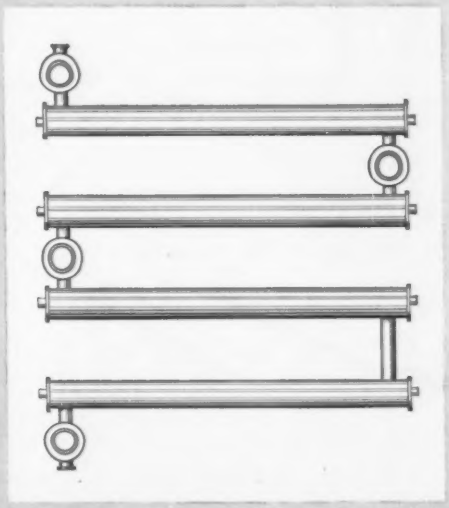
Besides the Rapid Cycle and Continuous Digesters, Bauer equipment comprises Pressafiners, single and double revolving disc refiners, "Pump Through" refiners and Centri-Cleaners. All are shown in our Bulletin No. 56. Each is fully described in a separate bulletin.

The digesters are for full chemical, semi-chemical, and steamed wood operation.



### Bauer Rapid Cycle Digester

This automatic quick-acting stationary digester cooks wood chips through rapid time cycles which are possible by means of elevated temperatures and pressures. Cooking occurs in either the liquid or vapor phase. Operation is simple. The compactness of the digester provides high capacity in minimum space. Maintenance requirements are very low due to few moving parts in the pressure area.



### Bauer-Grenco Continuous Digester

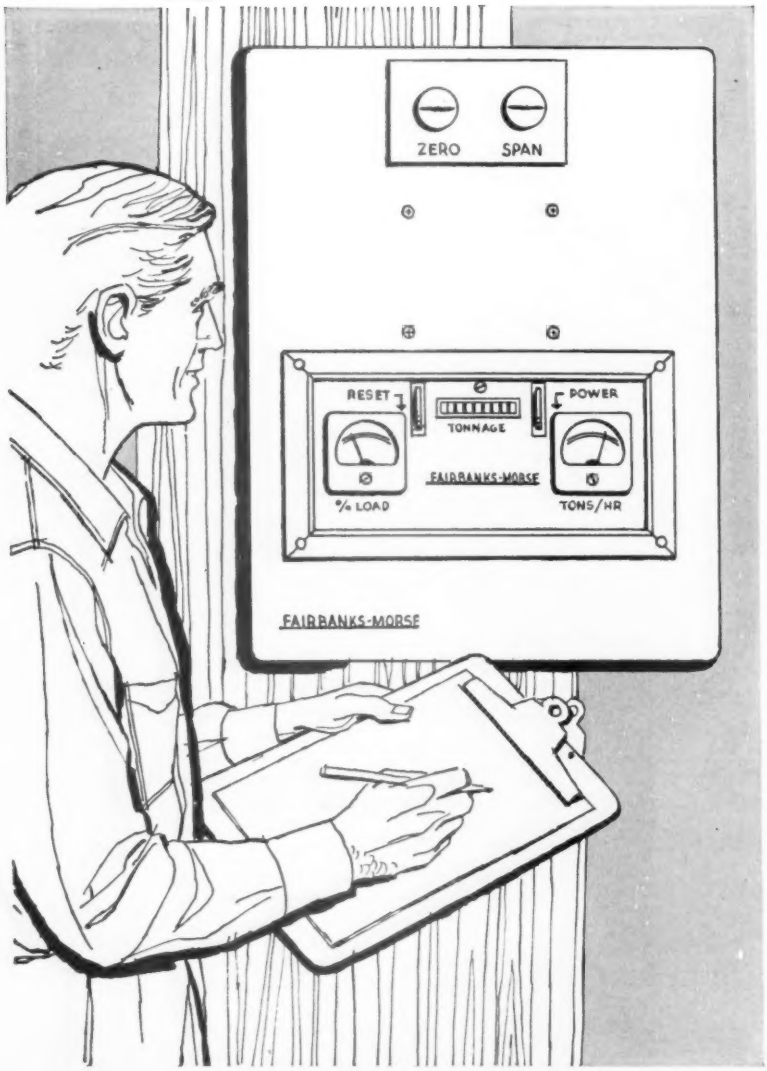
Actual mill experience proves that this digester provides all the advantages of continuous operation, principally due to the unique rotary valves. Minimum degradation occurs when chips are introduced into and expelled from the cooking chamber. The valves afford an excellent means of isolating the digester tubes. Being extremely versatile, the Continuous Digester can be tailored to meet tonnage and end-product requirements.

You are invited to request any or all of our literature; particularly, in this connection, Bulletin P-16 on Continuous Digesters and P-17 on Rapid Cycle Digesters.

**THE BAUER BROS. CO.**

DISC REFINER HEADQUARTERS

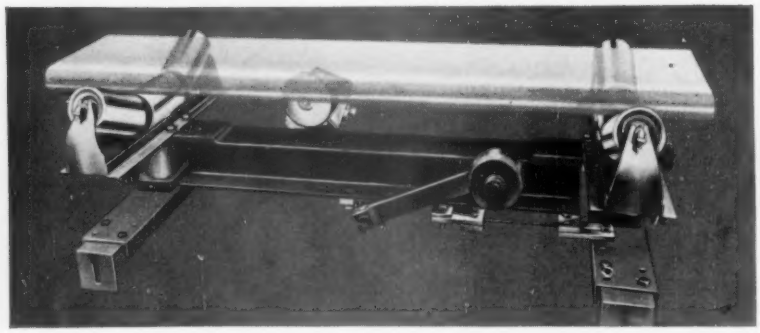
1706 Sheridan Ave. • Springfield, Ohio




# Weigh it on the run ...with electronics

There are no labor costs to be charged against weighing when you incorporate a Fairbanks-Morse electronic scale in your belt conveyor system. The belt will be moving anyway, and might as well be accumulating the record of passing weight in the process.

Because it is electronic, the registering instrument of the new Fairbanks-Morse Electronic Belt Conveyor Scale can be located remotely—for instance in the office with the rest of your business and accounting machinery.



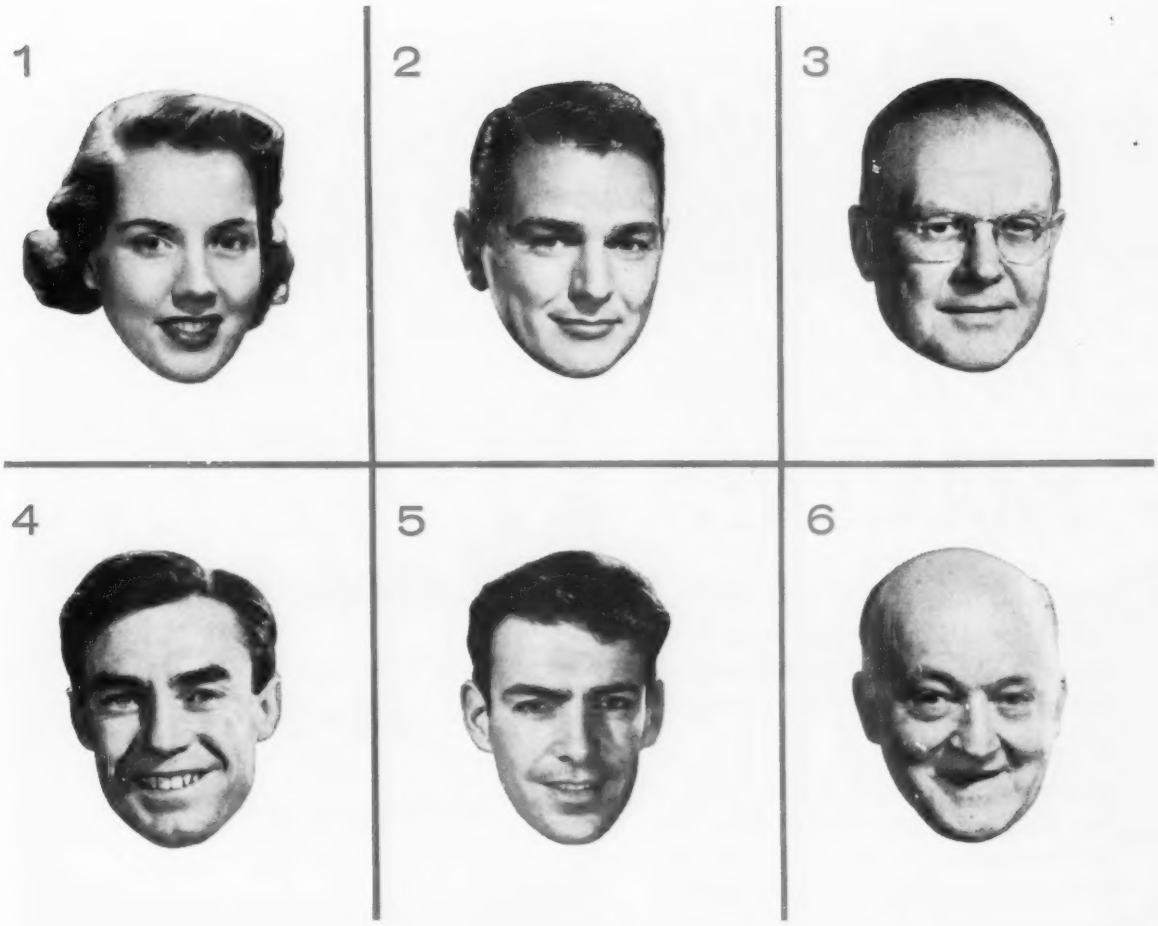
Accumulated weights are read on the remote instrument in digital figures, and there are other indicators to give you a running check on the general efficiency of your conveyor operation. A meter shows percentage of load at the given moment; another shows the rate of tonnage movement per hour.

There's a new bulletin, No. ED-12, on the Fairbanks-Morse Electronic Belt Conveyor Scale. Please write for it today. Fairbanks, Morse & Co., Dept. PUP-9, 600 South Michigan Avenue, Chicago 5, Illinois.

**FAIRBANKS-MORSE**

*a name worth remembering when you want the BEST*

SCALES • PUMPS • DIESEL LOCOMOTIVES AND ENGINES • ELECTRICAL MACHINERY • RAIL CARS • HOME WATER SERVICE EQUIPMENT • MOWERS • MAGNETOS




# Can you pick the SOLVAY Salesman?

**They all are!** The girl from accounting, the young man from traffic, the production expert or the man who fills the bags, the chemist in quality control, the old-timer in shipping . . . at Solvay everyone helps create sales by serving the customer.

The man you know—the salesman who calls on you—isn't shown; however, there's a staff of 6,000 men and women working with him to service your account. The service they render is just one reason why so many customers stay sold on Solvay.

But, Solvay service doesn't end with the sale. To many customers Solvay's Technical Service is the big plus value. This department stands ready to help you with process or product problems by supplying services not ordinarily available—at no extra cost.

Yes, Solvay salesmen—all 6,000—serve our customers. Call Solvay and see!

AMERICA'S FIRST PRODUCER OF ALKALIES
SOLVAY
75th YEAR 1881-1956

Soda Ash • Snowflake® Crystals • Chlorine
Potassium Carbonate • Calcium Chloride
Sodium Bicarbonate • Ammonium Chloride
Ammonium Bicarbonate • Caustic Potash • Chloroform
Sodium Nitrite • Caustic Soda • Methyl Chloride
Cleaning Compounds • Methylene Chloride • Monochlorobenzene
Para-dichlorobenzene • Ortho-dichlorobenzene • Hydrogen Peroxide

**SOLVAY PROCESS DIVISION**
ALLIED CHEMICAL & DYE CORPORATION
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Allied Chemical

BRANCH SALES OFFICES:
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# NOW belts ready to use in less than ½ the time with BRAND NEW




How many times in the past have you wished for a faster drying, more easily applied, waterproof cement for your leather belts? Here, at last, is the answer to your problems!

After extensive development and conclusive field tests, Rhoads now brings you JE-538 Waterproof Cement—a new belt cement that will save you time and money because you can now get your belts into operation sooner. We realize that no cement is a "panacea" for all purposes, but we think JE-538 is worthy of a trial under your special conditions.

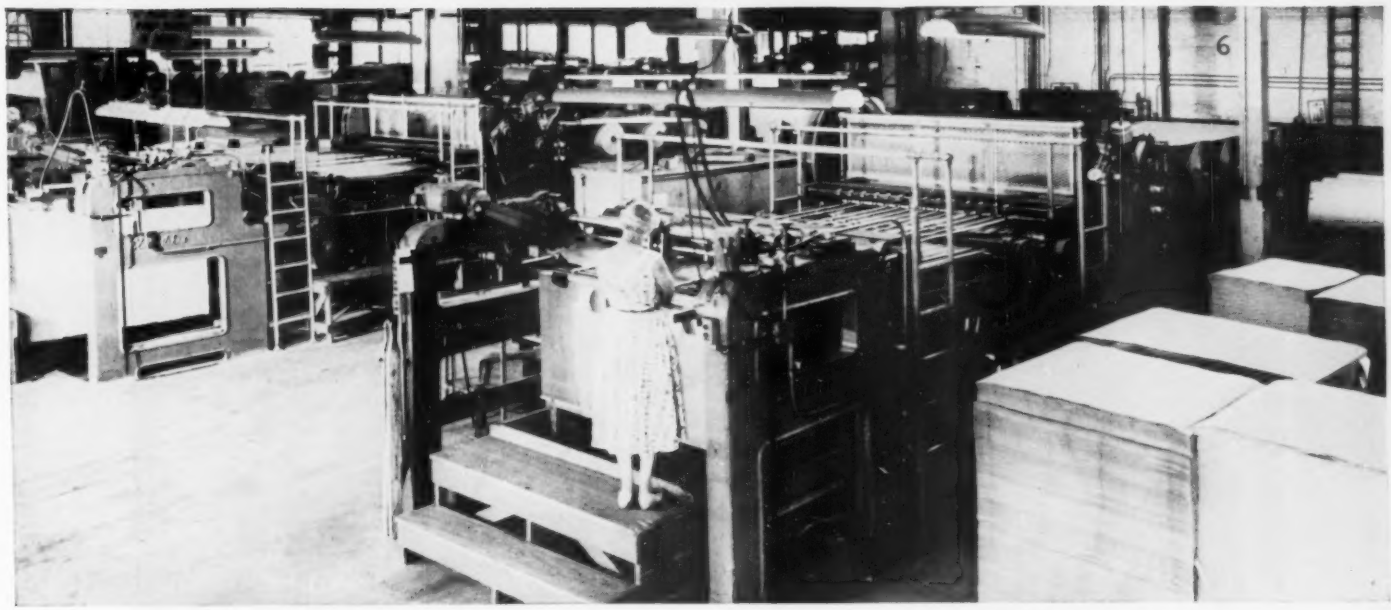
## just check these features:

1. **It dries in less than half the time** . . . under normal conditions a double belt can be run within an hour after application.
2. **JE-538 is stronger** . . . thorough tests show it to be stronger than other waterproof cements. It even sticks when leather is slightly moist or oily.
3. **Laps stay in place** . . . extra tackiness keeps the belt in alignment while cementing.
4. **Only one sizing coat is needed** . . . not two as often required by other waterproof cements.
5. **JE-538 withstands sharp flexing over small pulleys.**
6. **It is waterproof and oil resistant.** Belt laps are not weakened under normal operating conditions.

**RHOADS**
**INDUSTRIAL LEATHERS**

**2100 W. Eleventh St., Wilmington 99, Delaware**

**ATLANTA • NEW YORK • CHICAGO**



# 2 Clark-Aiken Sheeters

# Do the Work of 4 for KVP. . .

Reporting on performance of two 88-inch Type C Clark-Aiken Cutter-Layboy Units installed in 1954, Ralph Clark, of the engineering department of The KVP Company, Kalamazoo, Michigan writes:

*"These two Clark-Aiken Sheeters replaced four cutters previously used, so we are getting 100% increase per machine, assuming the same production requirements. Actually, they are capable of considerably better than this when properly serviced. Reloading time is one-sixth to one-eighth that of the former single unwind stand, due to duplicate unwind stands. There is probably as much as 50% less down time in removing sheet piles, due to improved layboy and piler operation, with less operator effort."*

*"They run well on the many weights and grades of paper we put through them and we are well pleased with their performance which is up to and may even exceed our expectations."*

Clark-Aiken's super-rigid design, employing heavy cast alloy iron frames and anti-friction bearings throughout, combine with perfect synchronization of all mechanism to provide smooth, vibrationless operation that permits sustained ultra-high-speed operation with unvarying dimensional precision.

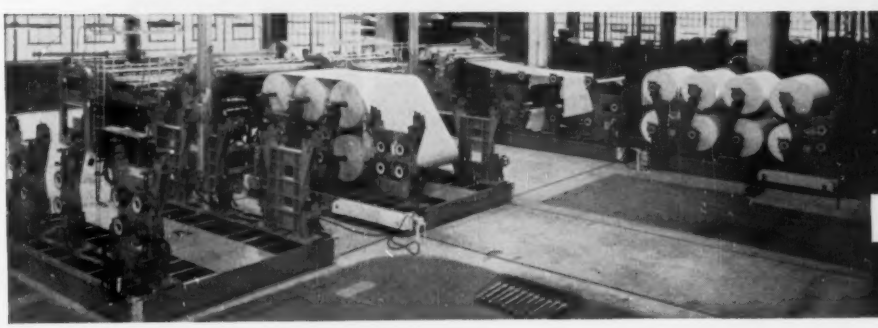
The roll stand installation, engineered by Clark-Aiken, uses power-operated transfer cars to cut change-over time to a fraction of that formerly required and modern Clark-Aiken Layboy design makes important savings in time required for pile removal.

In addition, KVP enjoys the benefits of these exclusive Clark-Aiken features:

- "Spiral Shear" Cylinder Knife cuts clean on any type or weight stock.
- One-piece Knife Assembly which eliminates the possibility of misalignment when squaring the sheet.
- Scale Setting of Slitters and Joggers which eliminates use of tapes and assures straight-line travel from slitters to pile.
- Lifetime non-stretch tapes which give many times the service life of older types.

Clark-Aiken makes three types of sheeters and three types of layboys to exactly suit any sheeting requirements and operating conditions. Clark-Aiken engineers will gladly study your sheeting operations, recommend a combination to do the job most economically and design a roll stand installation to enable you to enjoy maximum output from your sheeter.

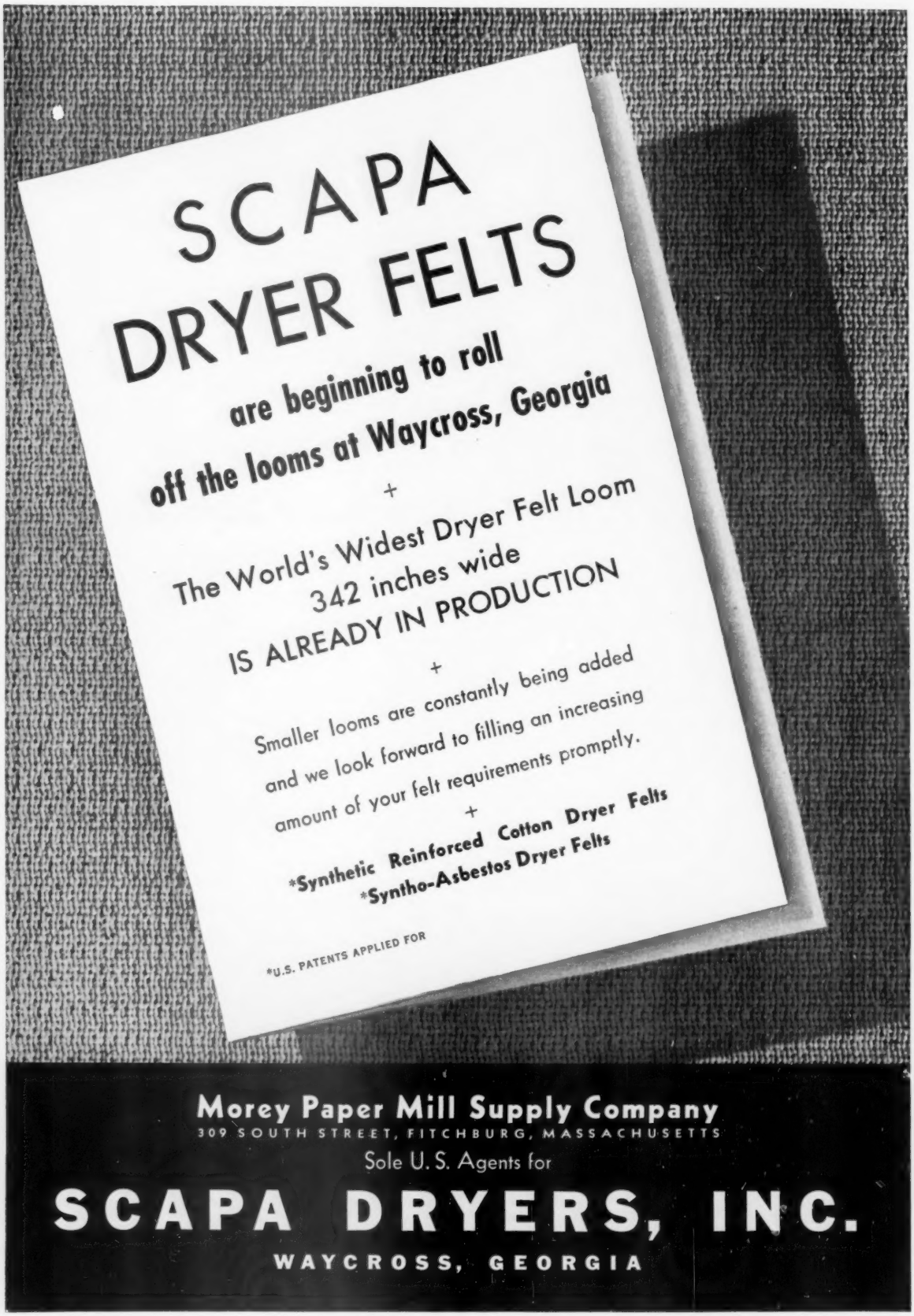
**Roll stand installation designed by Clark-Aiken engineers for KVP uses two motor-operated transfer cars for each sheeter. One stand is loaded while the other is feeding, permitting change-over in a matter of a few minutes.**

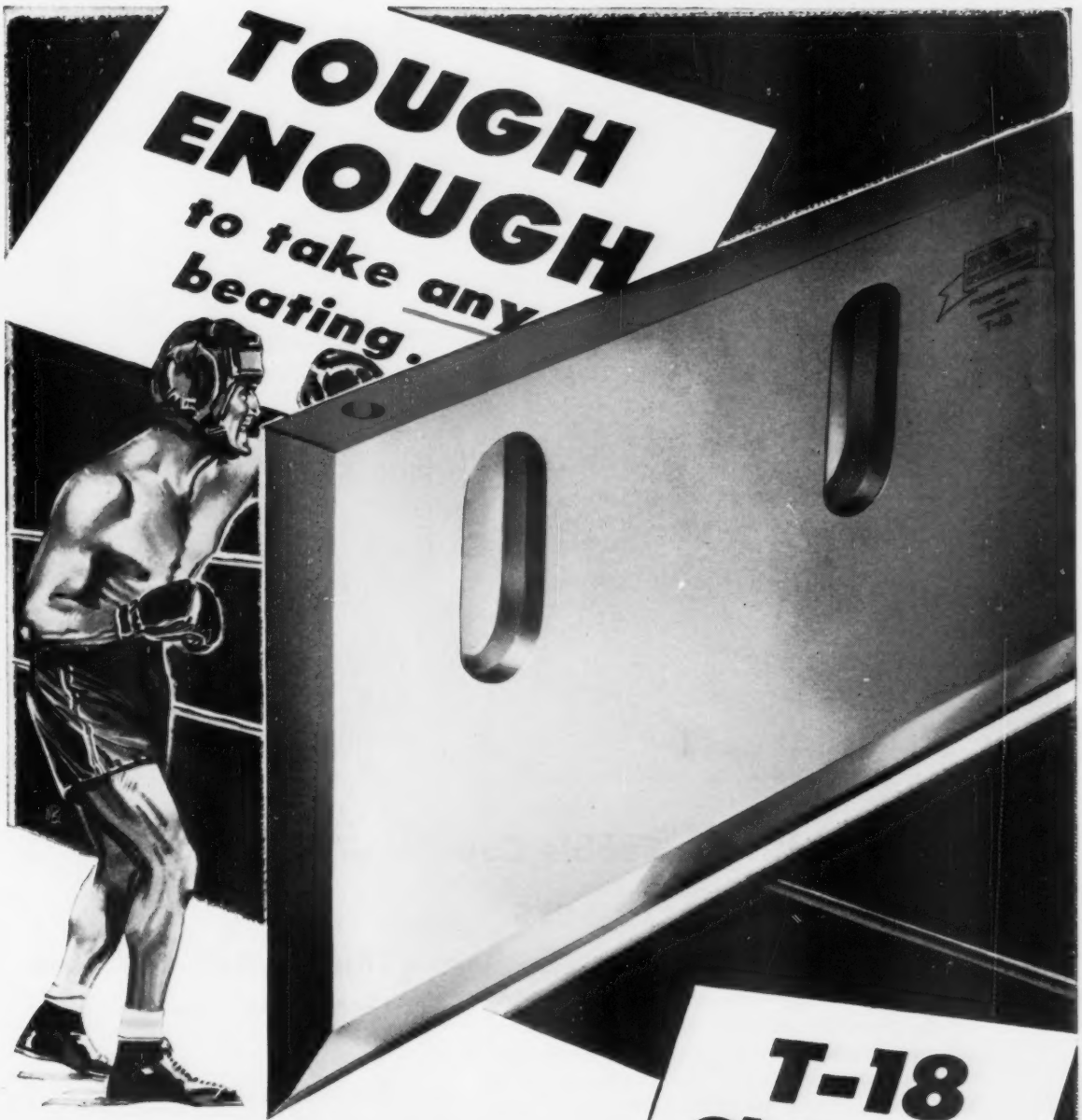


THE Clark-Aiken COMPANY

957 SPRINGFIELD ROAD

LEE, MASSACHUSETTS


SCAPA
DRYER FELTS
are beginning to roll
off the looms at Waycross, Georgia
+
The World's Widest Dryer Felt Loom
342 inches wide
IS ALREADY IN PRODUCTION
+
Smaller looms are constantly being added
and we look forward to filling an increasing
amount of your felt requirements promptly.
+
*Synthetic Reinforced Cotton Dryer Felts
*Syntho-Asbestos Dryer Felts
*U.S. PATENTS APPLIED FOR
Morey Paper Mill Supply Company
309 SOUTH STREET, FITCHBURG, MASSACHUSETTS
Sole U. S. Agents for
SCAPA DRYERS, INC.
WAYCROSS, GEORGIA




# SIMONDS

## T-18 Chipper Knives

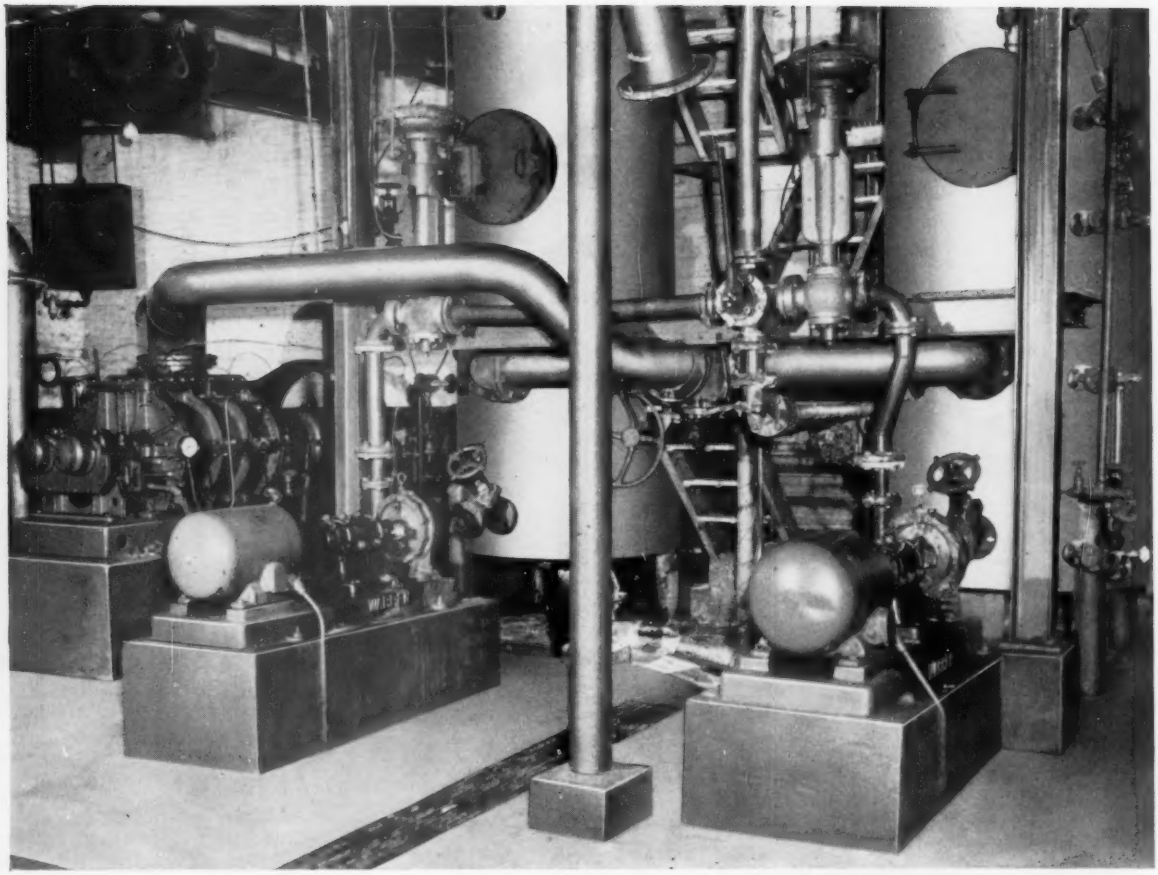
Chips aren't bruised and "beat-up" . . . they're not mashed and of uneven length . . . when they come out from under a Simonds T-18 Knife. But they *are* uniform in size, and that means they "cook" more quickly and evenly . . . make better-grade pulp.

Make sure you aren't losing money in your wood room. Equip all your chippers with these extra-tough knives of special Simonds T-18 Steel. They hold their cutting edge . . . hold your chip-output up and your sawdust-loss down.

Check your dealer today.

SIMONDS SAW AND STEEL CO.
FITCHBURG, MASS.

*Factory Branches in Boston, Chicago, San Francisco and Portland, Oregon, Canadian Factory in Montreal, Que., Simonds Divisions: Simonds Steel Mill, Lockport, N. Y., Heller Tool Co., Newcomerstown, Ohio, Simonds Abrasive Co., Phila., Pa., and Arvida, Que., Canada*



Chemipulp-KC bubble cap $SO_2$ absorption towers which help the Franconia Paper Corp., Lincoln, N. H., maintain the quality of its Profile Offset, Franconia Bond, Pressmans Bond and other fine papers for business and industry.

# Chemipulp-KC *Bubble Cap* $SO_2$ Absorption Towers

The Chemipulp-KC reversible type bubble cap absorption towers offer an unusually efficient method of absorbing $SO_2$ in lime, magnesium or sodium slurry. When burned lime is used, it can be any proportion of magnesium and calcium. Ammonia can also be used for efficient production of system acid.

Stainless steel provides long-life service and easy maintenance, and the towers, being reversible, are exceptionally easy to keep clean.

Teamed with the Chemipulp-KC jet-type sulphur burner and the Chemipulp-KC spray type $SO_2$ gas cooler, these absorption towers provide a highly efficient, low-cost method of producing system acid.

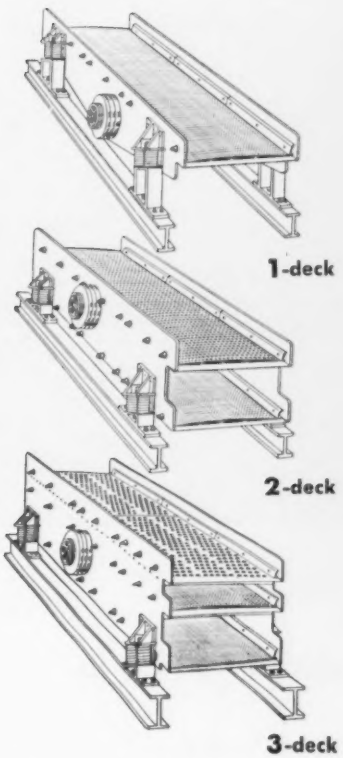
- **Efficient with any Base** — *Not Just Lime*
- **Reversible** — *Easy to Keep Clean*
- **Stainless Steel Towers, Downcomers and Bubble Cap Trays** — *Low Maintenance Costs* — *Neat Appearance*

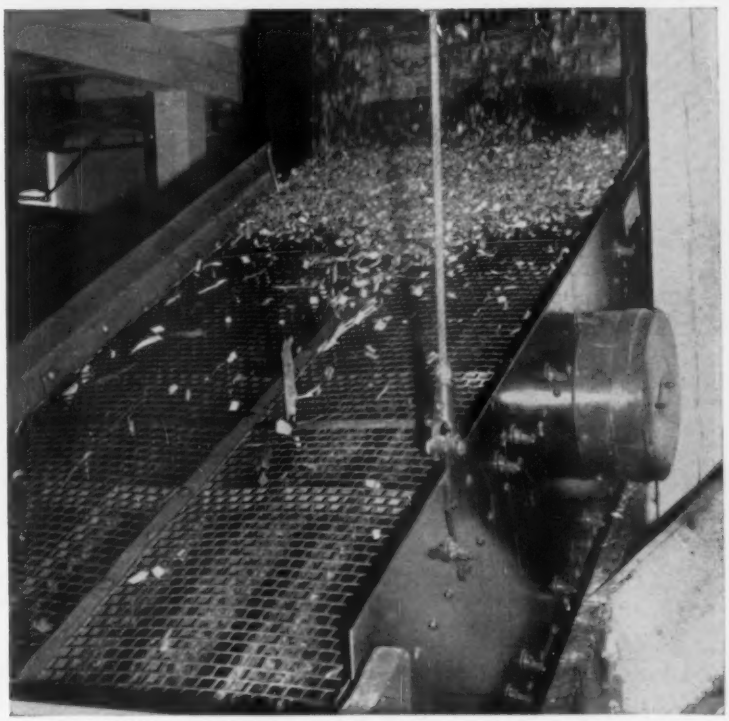
**Chemipulp Process Inc.**
Woolworth Bldg. Watertown, N. Y.

**Associated with Chemipulp Process Ltd., 403 Crescent Bldg., Montreal**
*Pacific Coast Representative, A. H. Lundberg, 308 Orpheum Bldg., Seattle 1, Wash.*

# LINK-BELT CA Concentric Action Vibrating Screens

# for high volume chip cleaning



Link-Belt CA double deck vibrating screen separating oversize chips, slivers and sawdust from wood chips. Note how quickly the chip load is cleared from the top deck.



Vibrating mechanism is grease lubricated and has two high capacity, self-aligning roller bearings. Efficient, frictionless labyrinth seals exclude dirt and abrasive dust. Spring-controlled centrifugal type counter-weight eliminates excessive resonant motion when starting and stopping.

## Powerful screens thoroughly separate sawdust and slivers

For speedy, thorough cleaning of chips, the trend is to Link-Belt Concentric Action Vibrating Screens. Circular vibrator motion imparts lively tumbling action which is uniformly distributed across every square inch of the screen deck. The bed stratifies rapidly—every particle is accurately sized . . . slivers and sawdust sharply separated. Low maintenance costs are also winning preference for CA screens among pulp and paper men.

There's a size for every job—4 to 6 ft. wide by 8 to 14 ft. long, in deck arrangements as illustrated. Your nearby Link-Belt office has full information. Send for Book 2554. Write for your copy.

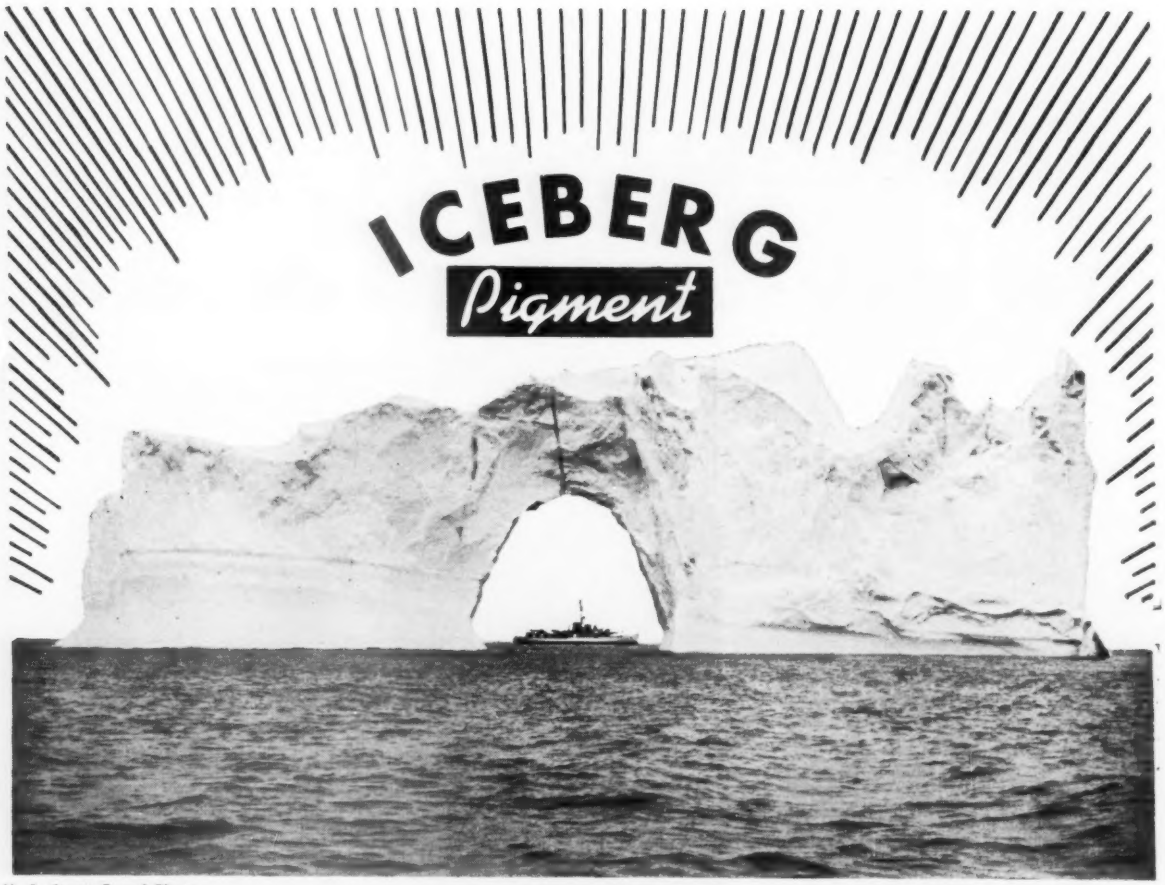


LINK-BELT

VIBRATING SCREENS

14,021

LINK-BELT COMPANY: Executive Offices, Prudential Plaza, Chicago 1. To Serve Industry There Are Link-Belt Plants and Sales Offices in All Principal Cities. Export Office, New York 7; Canada, Scarboro (Toronto 13); Australia, Marrickville, N.S.W.; South Africa, Springs. Representatives Throughout the World.




U. S. Coast Guard Photo

## "ICEBERG" and "ICECAP K" PIGMENTS

LOW COST BRIGHTENING AGENTS

**Replace costly white pigments in**

- **Bleached manila lined board**
- **White patent coated board**
- **Ground wood and/or sulphite furnishings.**

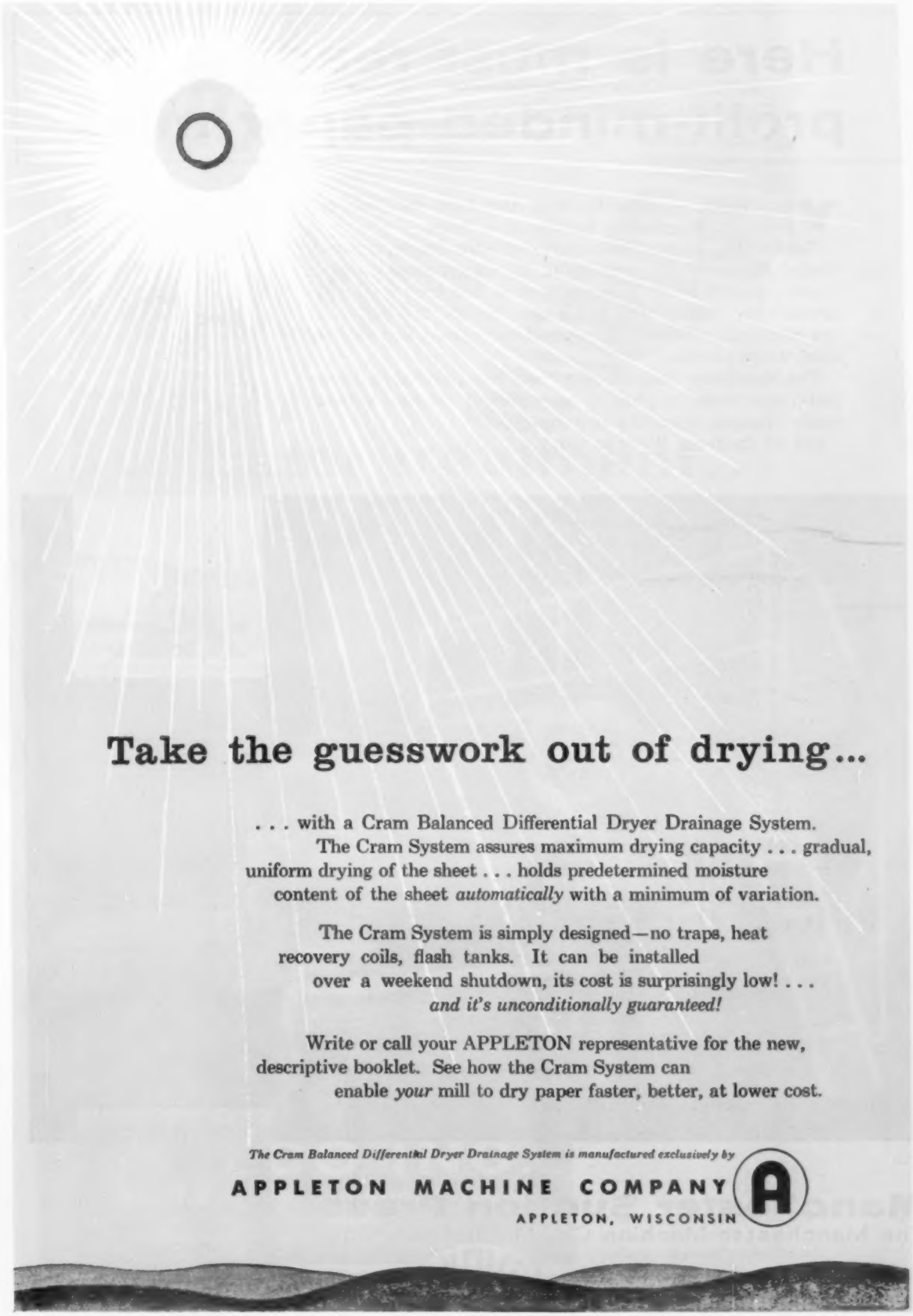
***Write for literature, working samples, and prices.***

**Burgess Pigment COMPANY**

**Mines and Plants: Sandersville, Georgia**

EXECUTIVE SALES OFFICES: P. O. BOX 145, SANDERSVILLE, GA.
West Coast: L. H. Butcher Co., San Francisco & Los Angeles, Cal.
Warehouses: Jersey City & Trenton, N. J.; Saylesville, R. I.

- **HYDROUS AND ANHYDROUS ALUMINUM SILICATE PIGMENTS**
- **KAOLIN CLAYS**



# Take the guesswork out of drying...

. . . with a Cram Balanced Differential Dryer Drainage System. The Cram System assures maximum drying capacity . . . gradual, uniform drying of the sheet . . . holds predetermined moisture content of the sheet *automatically* with a minimum of variation.

The Cram System is simply designed—no traps, heat recovery coils, flash tanks. It can be installed over a weekend shutdown, its cost is surprisingly low! . . . *and it's unconditionally guaranteed!*

Write or call your APPLETON representative for the new, descriptive booklet. See how the Cram System can enable *your* mill to dry paper faster, better, at lower cost.

*The Cram Balanced Differential Dryer Drainage System is manufactured exclusively by*

**APPLETON MACHINE COMPANY**

APPLETON, WISCONSIN

# Here is must reading for profit-minded paper mills

Your quality—and profit—will start here with this new improved Manchester Suction Main Press.

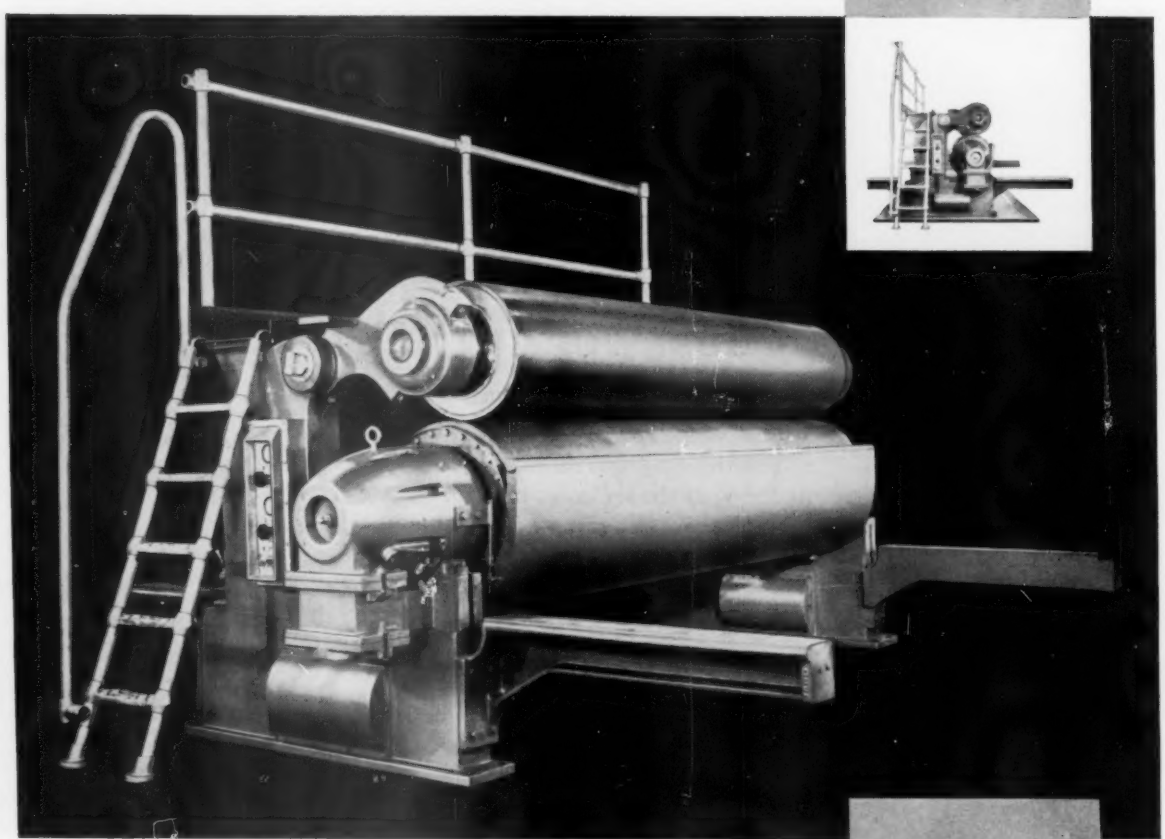
Take a close look at the picture. Note the simple, compact, rugged design of this press. With it, you get more complete water removal, better moisture control, less broke, a higher drying rate, cleaner felts, and longer felt life. The end-result is a more uniform top-quality sheet, steady profit, and a strong competitive position.

The Manchester Main Suction Press is engineered as a complete unit, ready to place in your present machine without costly changes or lengthy shutdown.

Get all the facts. Write us today.

**OTHER PRODUCTS:**

- Primary Presses
- Size Presses
- Pope Type Reels
- Paper Machine Drives
- Rubber-Covered Drilled Suction Press Rolls
- Drilled Suction Drum Rolls
- Drilled Suction Couch Rolls
- Cylinder Molds
- Smoothing Presses
- Winders and Slitters
- Complete Fourdriniers





**Manchester Suction Press**

The Manchester Machine Co., Middletown, Ohio

SPECIALISTS IN DESIGNING AND BUILDING PAPER MILL MACHINERY

# GOT A PROBLEM

## in water treatment...

## FOR your mill

If your process waters pose problems of clarification... color removal... lime softening... or your boiler waters require hot process softening... ion exchange... demineralization...

...whether yours is an existing or new mill...

...let INFILCO's long experience and familiarity with the pulp and paper industry's needs show you the way to increased profits, greater production efficiency!

...rugged, dependable, accurate chemical feeders and slakers! (Send for Bulletins #215, 217, 250, 350).

...for constant or proportional rate operation!

...clearer water faster, up to 80% savings in space with ...ACCELATOR* clarifiers! (Send for Bulletin #1825).

...soundly designed gravity and pressure filters! (Send for Bulletin #1825).

...ion exchangers and demineralizers! (Send for Bulletin #1960).



ACCELATOR CLARIFIER



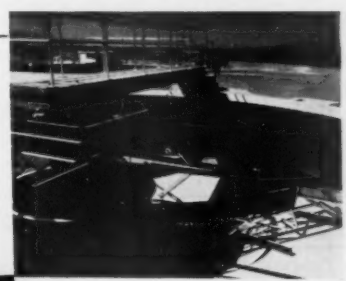
LIME FEEDER & SLAKER

## FROM your mill

If suspended fillers, fibres, chemicals create problems of re-use or pollution...

...INFILCO savealls assure you of more profitable operation by reducing your material and heat losses!

...let us tell you about CYCLATOR* treating plants (Bull. #850)
...SEDIFLOTOR* flotation savealls (Bull. #6051)
...INFILCARB anthracite filters for green or white liquors
...simplified causticizing systems
...and many other types of profit-making equipment!



SEDIFLOTOR UNIT

**INFILCO INC.**

**General Offices: Tucson, Arizona**

*The **one** company offering equipment for **all** types of water and waste treatment*

*Field Offices throughout the United States and in Foreign Countries*

*Serving the pulp and paper industry with water conditioning equipment geared to today's competitive conditions!*

*REG. U.S. PAT. OFF.

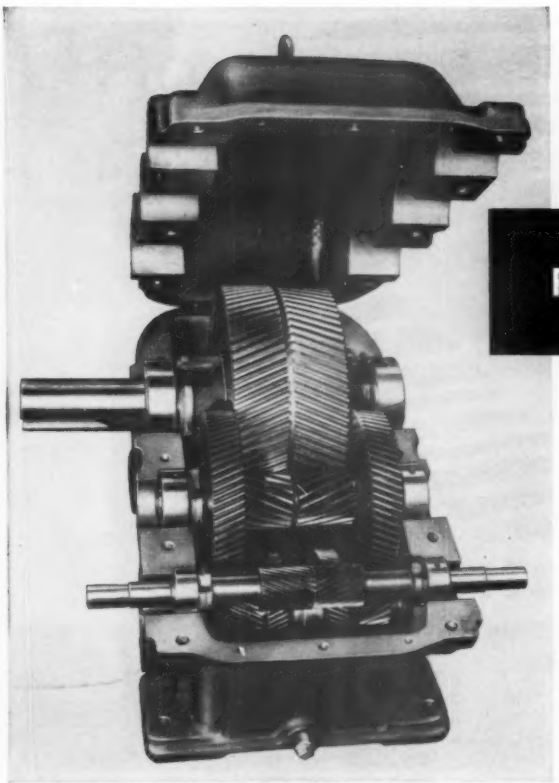


*Photo shows triple reduction speed reducer, typical of Western Gear's high quality design and construction.*

**POWER TRANSMISSION TIPS**

# How To Use Service Factors Correctly In Selecting Gear Units

By Glenn Jorn

*Industry Specialist-Forest Products, Western Gear Corporation*

Experience in the gear industry has led to the adoption of a rule of thumb:

***"The life of a gear unit increases in proportion to the cube of the service factor."***

To illustrate this we have shown in the table below how much additional life can be gained with a small increase in service factor.

| Original S. F. | Increased S. F. | Resulting Increased Life |
|---|---|---|
| 1.0 | 1.25 | Nearly Doubled |
| 1.25 | 1.50 | 1.73 |
| 1.50 | 1.75 | 1.58 |
| 1.0 | 2.0 | 8.0 |

The first example in the table shows that you can nearly double the expected life of a gear unit by increasing your service factor from 1.0 to 1.25. The cube of 1.0 is still 1.0 and the cube of 1.25 is 1.95. The increased life shown in the last column is obtained with a very small increase in first cost.

Catalog HP ratings are for 8 to 10 hours' service per day under uniform loads. Manufacturers' catalogs show tables that classify your load and recommend service factors for most standard applications. If there is anything about your application that is unusual, or if downtime would be unusually costly, a more thorough study of service factors is warranted.

Gear units are designed to handle *momentary* overloads up to double the catalog rating without failing. The thermal rating is the load that the gear unit can continuously transmit under normal ambient conditions without overheating. The thermal rating should equal or exceed the HP transmitted before applying any service factor.

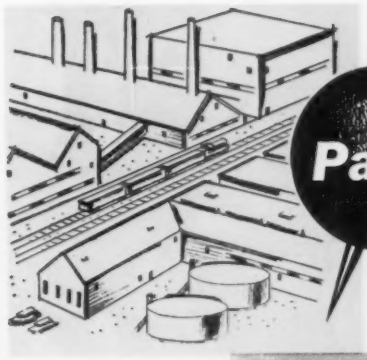
In well organized lumber, pulp and paper industries, shutdown periods are planned and scheduled beforehand. An unscheduled shutdown resulting from gear failure can be extremely costly in lost production, time and dollars. It can even become a safety hazard. Extra service factor is the least expensive insurance obtainable against such failures and loss.

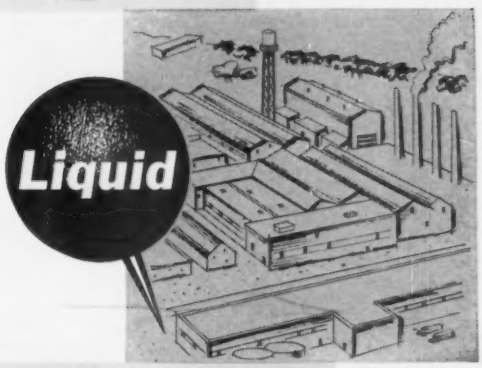
A test stand is used only intermittently and may become obsolete in a few years. For this application strength is more important than wear, and a minimum service factor may be adequate. One precaution – if it is a variable speed test stand, be sure to size your components on the maximum torque condition and specify your maximum speed.

If every 0.1% efficiency is of great importance, remember that heavily loaded gear units are generally more efficient than lightly loaded gear units. This may call for a decrease in service factor.

Take advantage of the services of your Western Gear application engineer. He can make available to you experience accumulated since 1888 by Western Gear, a leader in the field of design and manufacture of mechanical power transmission equipment. A complete line of speed reducers is offered in all shaft arrangements, horsepowers and ratios to solve your gear drive problem efficiently and economically. Write on your letterhead for Bulletin 5402 which gives details and engineering data. Address General Offices, Western Gear Corporation, P.O. Box 182, Lynwood, California.

# NOPCO HAS THE DEFOAMER THAT WILL GIVE BEST RESULTS FOR EACH MILL







Nopco, the first to make a chemical defoamer for the pulp and paper industries, has an unrivalled wealth of first-hand experience, and the widest range of defoamers...paste, liquid, and flake. One thing we know for sure—there's no such thing as a defoamer that works equally well in *every* mill. Local conditions vary too much.

That's why we prefer to analyze a sample of white water from your mill. We test it with every potentially effective defoamer—including if you like, the one you are now using. When we have finished our exhaustive tests, we are able to determine scientifically and impartially, which defoamer will give your mill the even fiber distribution, fewer breaks, higher machine speeds, and improved sheet formation that you should have.

What you want is the absolute minimum of foam in your operation. If you haven't given Nopco a chance to "prescribe", you can't be sure you have that absolute minimum. Why not consult Nopco Chemical Company, today?

NOPCO

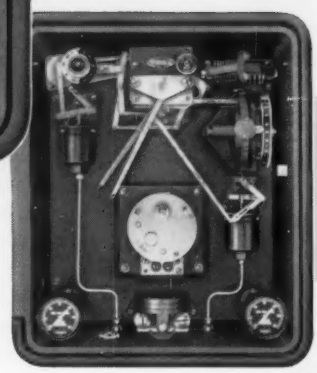
PLANTS: Harrison, N. J.
Cedartown, Ga. • Richmond, Calif.
London, Canada



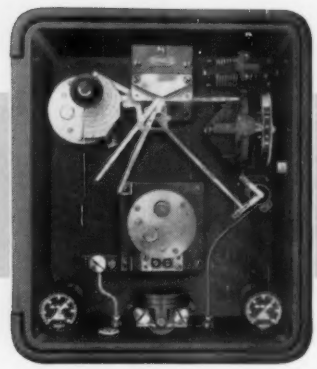


**BASIC 60000**
**PNEUMATIC CONTROLLER**

The basic controller provides versatility by combining proportional, differential-gap and on-off control, each with reversible action, in one instrument. Subassemblies may be installed to add the functions of reset and derivative. The exclusive gimbal unit enables you to select type of control and action and to adjust proportional band with one simple setting of the proportional band wheel. Large knurled knobs facilitate adjusting set point, reset rate and derivative time. All settings are made without disturbing the chart.



These are the functions you can perform. Pneumatic Set may be added to provide pneumatic positioning of the set point. Remote operation uses output pressure from another controller, a transmitter or a manually adjusted loading regulator.



Time Schedule may be added to position set point in accordance with a process-time schedule. Cam operation and chart record are in same instrument. Separate cam drive permits recording two or more cycles during one chart rotation.

# THE VERSATILE 60000
# ADVANCED LINE OF MASONEILAN CONTROLLERS

**Complete series of pneumatic controllers features accuracy, dependability and simplicity — low over-all cost.**

The answer to measuring or controlling your process can very likely be found in these Masoneilan Controllers. Many different functions can be performed, separately or in combination, using this advanced 60000 series. The features and flexibility are noteworthy:

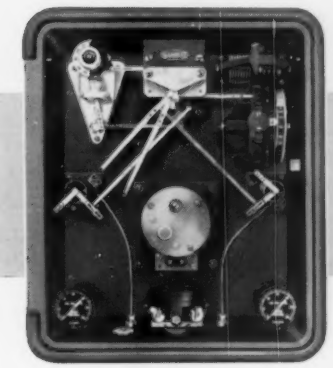
- Unit subassemblies for independent servicing or interchange.
- Gimbal unit provides four combinations of primary and feedback motion.
- All air passages manifolded — with plug in connections for all pneumatic units.
- Modern design, tailored appearance — easy to mount and to service; recording or indicating types.

Select the right combination for your process control from the variety of models shown here. Then, plan to standardize on this advanced line — it will save you money on over-all instrument investment and pay-off in dependable performance. Contact the Masoneilan representative nearest you, or write:
Mason-Neilan Regulator Co., 1301 Adams St., Boston 24, Mass.

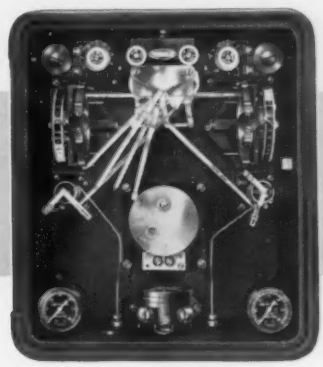
**MASON-NEILAN**
*Division of Worthington Corporation*
**27 NAHATAN STREET, NORWOOD, MASSACHUSETTS**

MASONEILAN

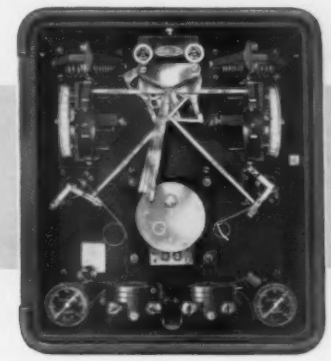
*Sales Offices or Distributors in the Following Cities:* New York · Syracuse · Chicago · St. Louis
Tulsa · Philadelphia · Houston · Pittsburgh · Atlanta · Cleveland · Cincinnati
Kansas City · Phoenix · Detroit · San Francisco · Louisville · Salt Lake City · El Paso
Albuquerque · Charlotte · Los Angeles · Corpus Christi · Denver · Appleton · Birmingham
New Orleans · Dallas · Seattle · Mason-Neilan Regulator Co., Ltd., Montreal and Toronto



Differential mechanism is added to position set point by one of two similar variables between which a differential is being maintained by controller; or by one of two dissimilar variables between which the controller is maintaining a relationship.



The Dual Selector Controller consists of two complete control mechanisms which actuate a common pilot interchangeably, according to process requirements. It is used where two related variables may be controlled by a single valve.



Dual Controller has two complete units, including primary elements, in one case. Controls two similar or dissimilar variables and either or both may be recording or indicating. Duplex Controller has two mechanisms but one primary element. May be two controllers or controller and transmitter.

**YESTERDAY** ... a ceiling
on tonnage and profits

**TODAY** ... rebuilding
to keep pace in
speed and quality

Yesterday's competitive challenge was readily answered with papermaking machines that are still producing a quality sheet — but not in the quantity needed for today's peak demands.

That's why, in leading mills across the country, Puseyjones' engineers have supervised machine-rebuilding programs — to increase speed, improve quality, step up profits. And yesterday's machine, rebuilt today, is your assurance of tomorrow's profits.

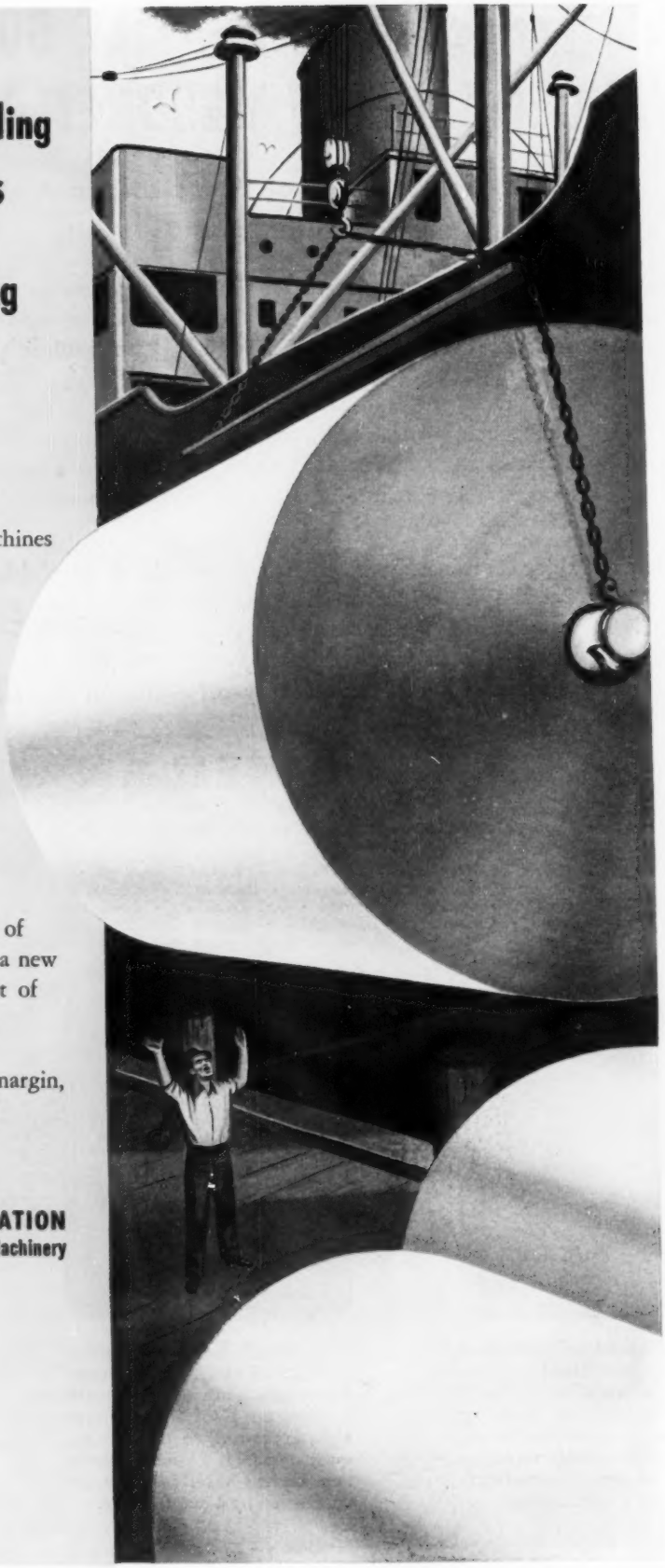
Whether you need a complete machine-rebuilding . . . the replacement of an obsolete drive . . . or the addition of a new Puseyjones development, get the benefit of Puseyjones' experience. For a wide range of higher grade products, for lowered maintenance costs and a better profit margin, discuss your machine problems with Puseyjones. Write or call us today.

**THE PUSEY AND JONES CORPORATION**
**Established 1848 : : Builders of Paper-Making Machinery**

*Fabricators and Welders of all classes of Steel and Alloy Products*

**Wilmington 99, Delaware, U.S.A.**

THE SIGN OF TRADE MARK SUPERIOR QUALITY



# Johns-Manville organizes to give you better insulation service

*New and separate insulations division created to provide industry greatly improved Sales and Engineering service to meet modern problems*

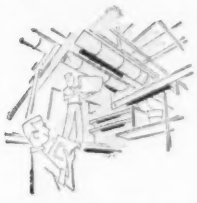
• Johns-Manville is now concentrating all industrial insulation operations within a new, fully integrated insulations division. This greater specialization makes possible the most complete insulation service available to industry. It consists of—



**Sales Representatives . . .** men on whom you can rely for your insulation recommendations. Your J-M salesman will help you select the insulating material exactly right for your job—the one that will provide maximum fuel savings, improved process control, and minimum maintenance. As co-ordinator of J-M's extensive research-engineering-manufacturing facilities, he offers you outstanding insulation training and experience.



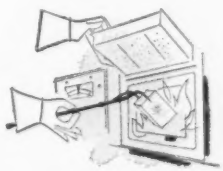
**Insulation Engineers**—Backing up the J-M salesman on every job is the J-M insulation engineer. He is primarily concerned with solving insulation problems. He recommends the economic thickness of insulation, as well as the proper finishes, weatherproofing and securement. His highly specialized knowledge makes possible an intelligent recognition and handling of your individual insulation requirements.



**Insulation Contract Units . . .** Fully aware that no insulation is better than the man who applies it, the J-M Insulation Contractor makes care and skill in the scientific application of Johns-Manville insulations his stock in trade. He maintains a complete crew of estimators and mechanics trained in J-M application techniques. He is ready to give you fast, efficient service on any insulation job—large or small. Proud of his reputation for integrity in his own community, the J-M Insulation Contractor merits your complete confidence.



**Complete Range of Products**—In this day of exacting temperature control, the need for specific insulations for specific services is greater than ever before. Recognizing this, Johns-Manville manufactures insulations for every industrial requirement. Produced from the finest grades of asbestos, magnesium carbonate, diatomaceous silica, refractory clays and ceramic fibers, they are designed to afford maximum insulating effectiveness and durability at operating temperatures ranging from minus 300F to plus 3000F.



**Extensive Research Facilities**—At Manville, New Jersey, Johns-Manville maintains the world's most completely equipped insulation laboratory. Here insulation scientists are engaged in a continuous program of developing new and better insulating materials. In addition, their technical knowledge is always available to J-M customers whose insulation problems require special study.



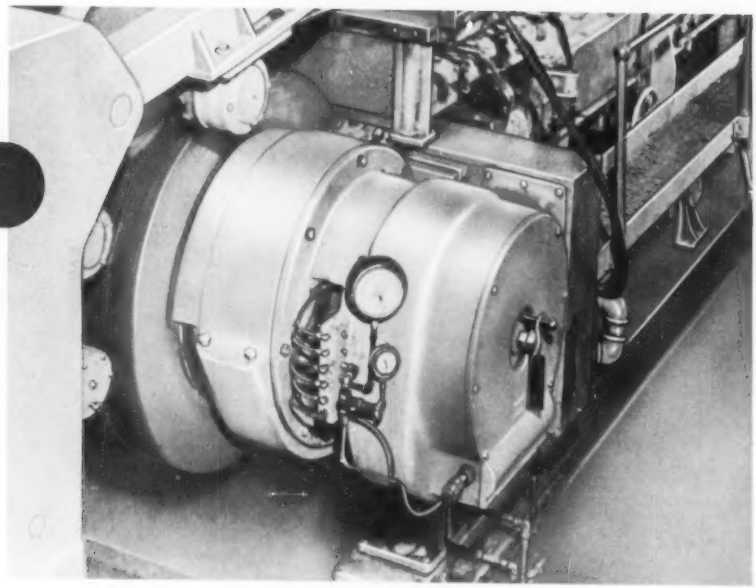
**Experienced Management**—At headquarters as well as in the field, management of the new insulations division consists of men who, in line with J-M's promotion-from-within policy, are insulation veterans. With a realistic grasp of customers' needs, they are alert to new and better ways to serve you . . . now, and in the future.

**On Your Next Insulation Job**—Whether your next insulation job is big or little, simple or complex, let Johns-Manville handle it for you. Just call your nearest J-M sales office, or write direct to Johns-Manville, Box 14, New York 16, New York. In Canada, Port Credit, Ontario. *Chances are, you'll be glad you did!*

**Johns-Manville** *first-in* **INSULATION**

**MATERIALS · ENGINEERING · APPLICATION**

**suction couch roll**



*Black-Clawson-Downingtown rolls are furnished in many variations for:*

Fourdriniers
- Suction Couch Roll

Cylinder Machines
- Suction Drum Roll
- Suction Cylinder Couch

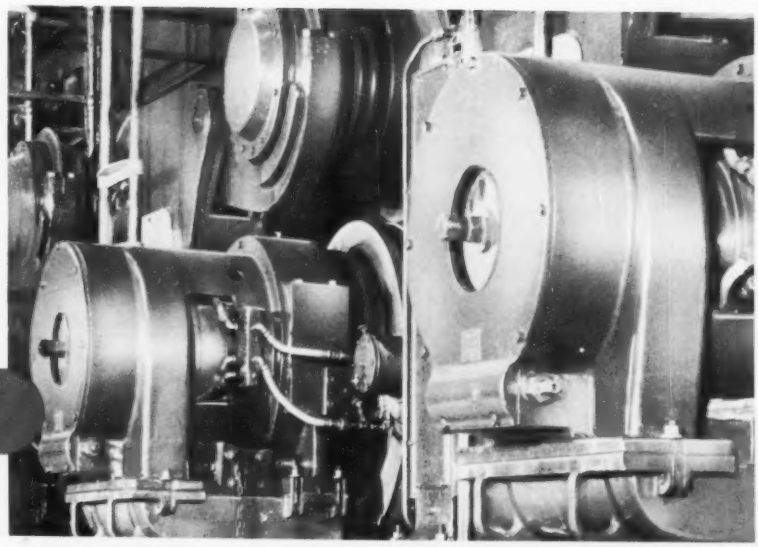
Press Sections
- Suction Pickup
- Suction Transfer Press
- Suction Main Presses
- Suction Primary Presses (Cyl. Mach.)
- Inverse Suction Press
- Suction Hot Press

Felt Conditioning
- Suction Wringer Rolls
- Suction Felt Rolls

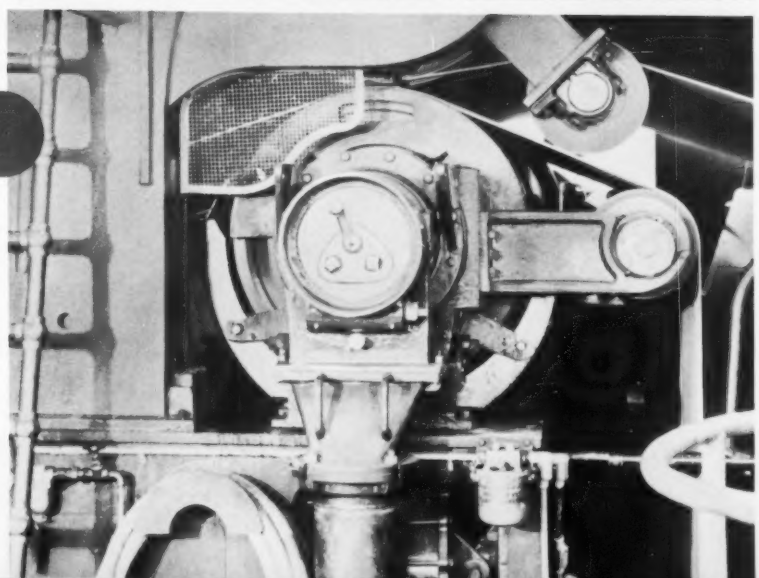
Forming Sections
- Suction Cylinder Couch

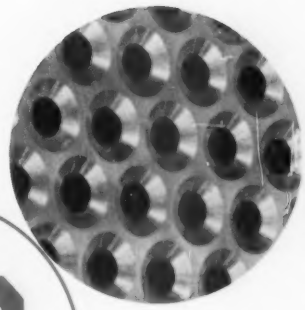
# now it's

**suction press rolls**



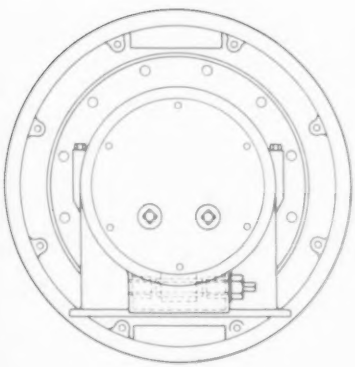
**suction hot press**





# Black-Clawson - DOWNINGTOWN

## for all suction roll applications



Black-Clawson is now engineering and manufacturing a complete line of suction rolls based on the widely accepted designs and specifications developed by the former Downingtown organization.

Rolls up to 54″ in diameter and 360″ in length for all applications on Fourdrinier, cylinder and wall board machines can be furnished through the production facilities now located at Black-Clawson's Paper Machine Division, Watertown, N.Y.

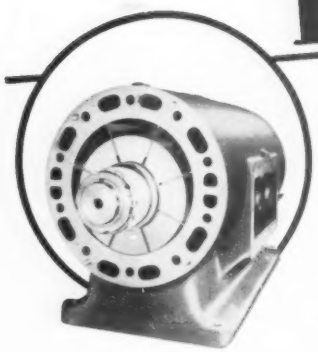
All important factors such as diameter, shell material, drill pattern, width of box and vacuum requirements are carefully analyzed by experienced suction roll engineers in the proper application of various types of rolls to meet specific production requirements of existing and new machines.

Call on Black-Clawson for advice, engineering and service on all suction roll applications.

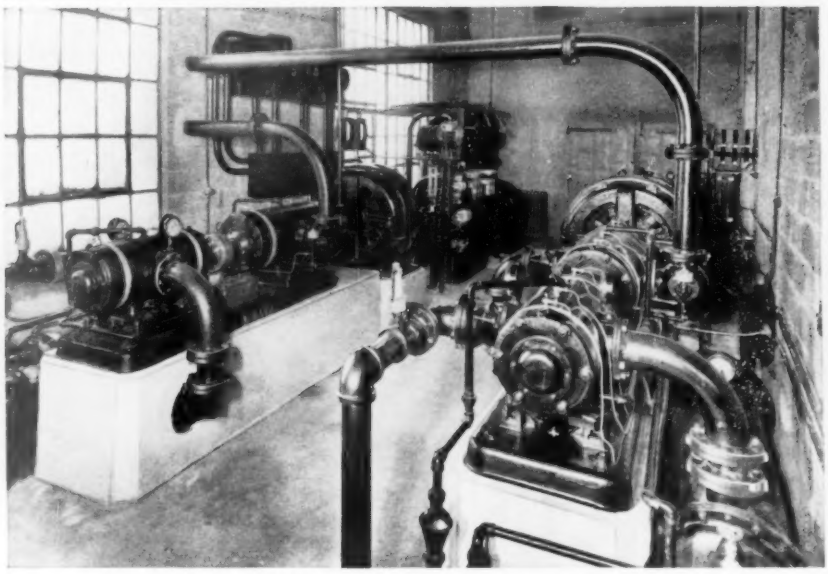
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# Fuller pioneered



## the two-stage rotary compressor . . . for general industrial use . . . starting in 1930



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Two Fuller Rotary Two-stage Compressors. Capacity each 740 c.f.m., 100-lb. pressure.

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Fuller has built and sold thousands of Fuller Rotaries—a large proportion of the two-stage type. And, when plant expansion is necessary, with a consequent demand for more air, additional Fullers are naturally installed.

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We welcome the opportunity to present to you all the facts concerning Fuller Rotary Compressors, facts built on actual operational experience. For a complete description of Fuller Rotaries, write for Bulletin C-5A.

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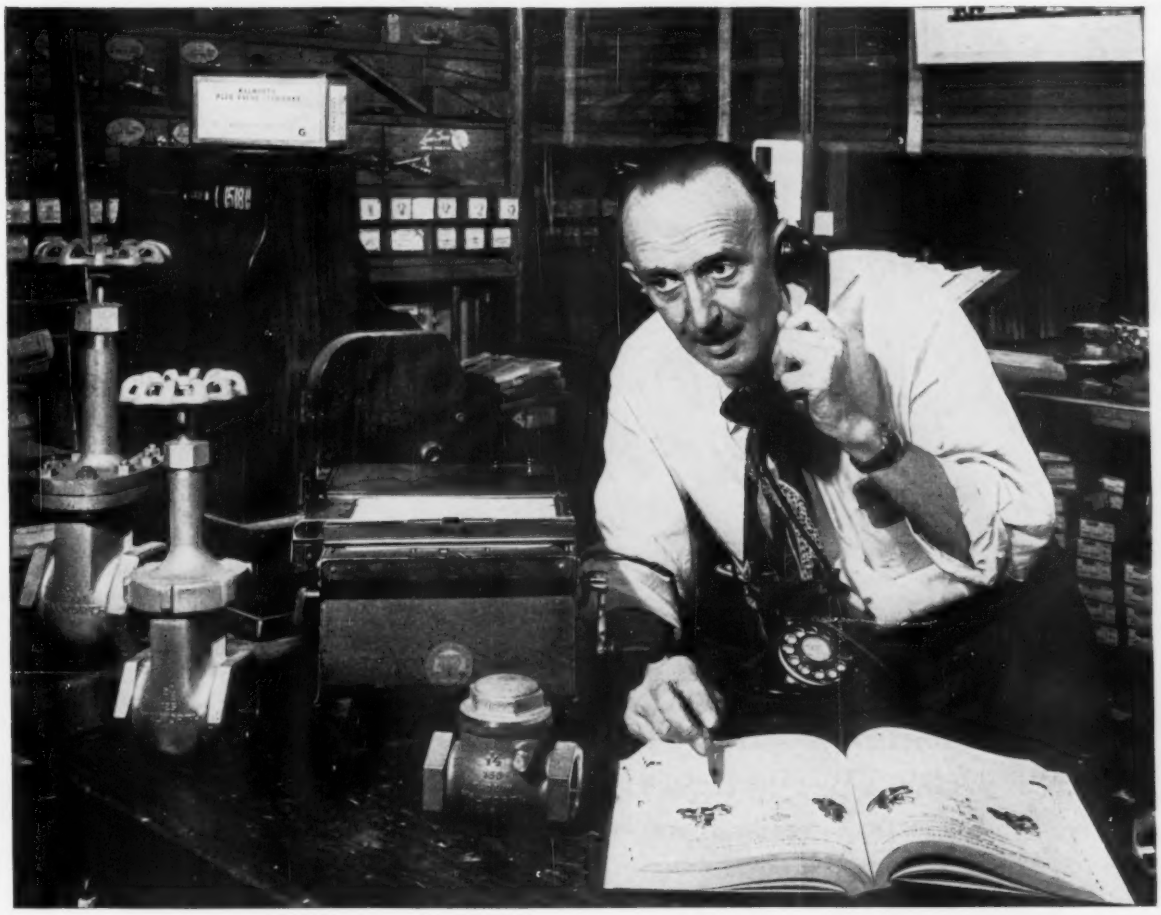
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*Fictitious name used to typify over 400 Walworth Distributors

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# AMERICAN (DISC-TYPE) SAVEALL

## Handles 1600 GPM at



Installed late in 1955 at St. Regis Paper Company's Bucksport, Maine Mill, this 9 ft. by 12 disc American Saveall was specified to handle 1200 GPM. However, with only 10 of its 12 discs in use, this new machine, equipped with a rubber covered fabricated center shaft of special design, is handling 400 GPM over and above its original design capacity.

Operating data at St. Regis substantiates the overall efficient application of the Saveall — cloudy water — 2.62 lbs./1000 gal. and clear water — .37 lbs./1000 gal. at a speed of 65-80 S.P.R.

The American Disc-Type Saveall is available in two sizes — 9 ft. dia. with a maximum of 12 discs having 1300 sq. ft. filter area requires only 23 ft. x 12 ft. floor space, and 7 ft. dia. with a maximum of 8 discs and 560 sq. ft. filter area requires 8½ ft. x 15½ ft.

Outstanding operating advantages include — large filter area and high capacity with minimum floor space, easy and quick replacement of disc sectors, and fully automatic and continuous operation.

For more information on the American Disc-Type Saveall write for Bulletin 701-R. Dorr-Oliver Incorporated, Barry Place, Stamford, Connecticut, U. S. A.

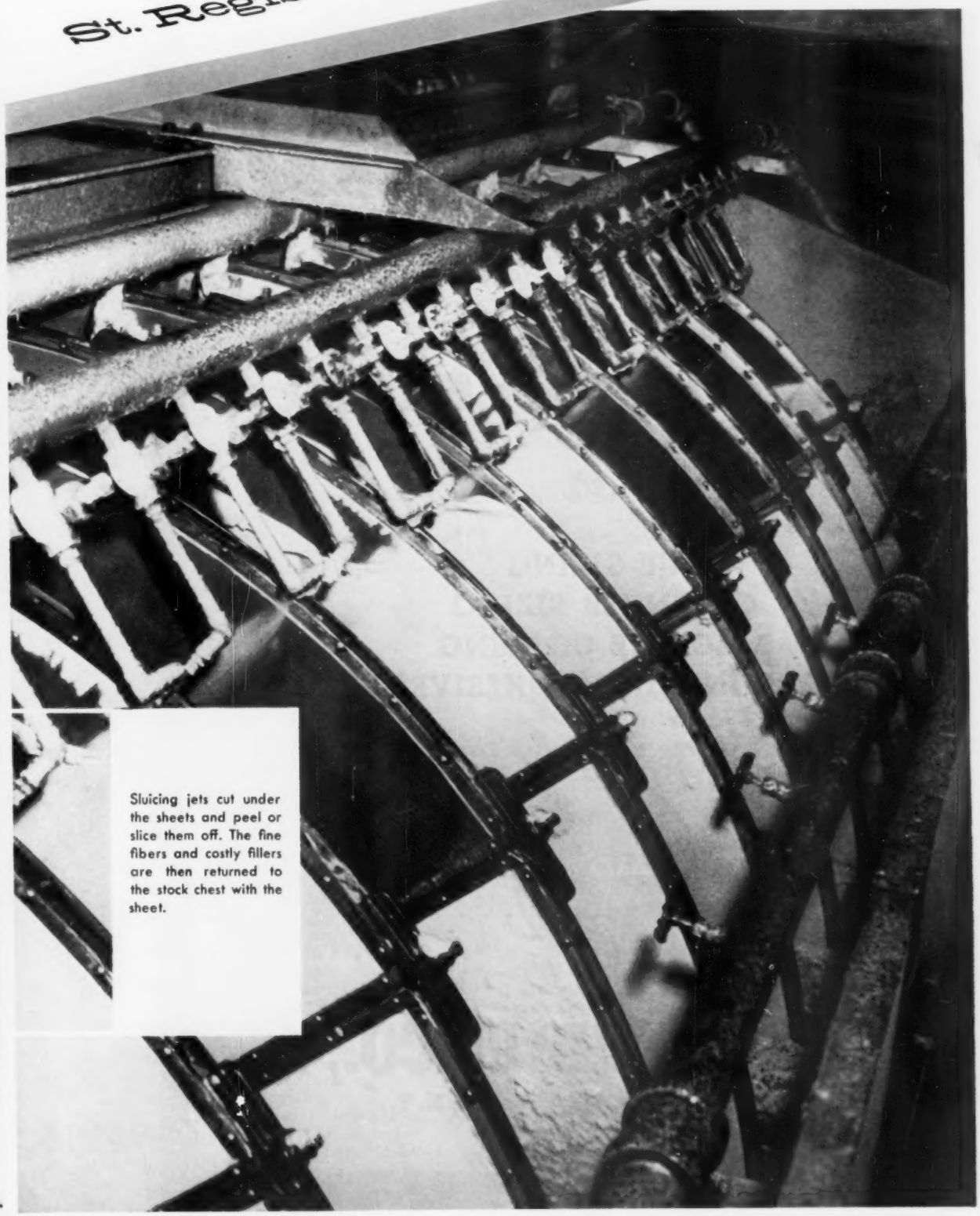




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Sluicing jets cut under the sheets and peel or slice them off. The fine fibers and costly fillers are then returned to the stock chest with the sheet.

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# How Industry Leaders View Expansion

## Many top executives interviewed by PULP & PAPER. Some see added production as threat, others, as a challenge

*This article is based upon actual interviews with many top executives. Names are withheld but they are all well known, respected leaders. Their actual quotes are given.*

● As the industry steams full speed ahead toward what promises to be a third straight record year (U.S. paper production in 1956 will be an estimated 32,000,000 tons), top officials are gathering the wisest heads around conference tables to discuss one hot subject: Expansion.

The president of one of the ten biggest pulp and paper companies recently summoned his leading men into executive conference; told them, "Increased concern is being evinced over the possibility that the industry may be overexpanding. Perhaps the answer is that this is a challenge to creative and imaginative thinking!"

Not all his contemporaries will go along with him. Opinions range all over the lot from "too much expansion" and "just enough," to "not enough." It all depends upon whom you talk to.

"Are we or are we not expanding too much?"

Across the nation, PULP & PAPER editors asked this question of top pulp and paper sales executives and other top executives. Here's what they said.

**WHAT A PULP SALES EXEC SAYS . . .** "There are two ways of looking at it," ventured a vice president in charge of pulp sales. "To the already established mill we say: 'There's going to be stiff competition. You might lose business but you'll have to produce the best possible pulp and you'll need an active sales force.'

"To "X" Company that might be coming into the pulp business, we say, 'You're on the outside looking in and to get in you will have to take business away from an already established mill and to do that you too will have to produce the best possible pulp.'"

**MUST AVOID PRICE WAR . . .** "No doubt about it—we don't think all that pulp can be absorbed (10,000,000 additional tons in the next three years in U.S. and Canada). But there won't be chaos either. Things are happening all the time for new markets. From a sales standpoint you have to avoid a price war. Just this morning a customer was kidding us about cutting our prices. We told him that if our price goes down it won't be long before his customers begin clamoring for lower paper prices.

"Very careful merchandising is the key and the answer to possible overproduction. We may have to curtail production a little; maybe drop from a 7-day operation to 6-day. But the greatest mistake we can make is to sit back and say we will cut prices.

"The key is careful merchandising," he re-emphasized, "and the maximum exploitation of foreign markets. No sense being an ostrich about it."

**OVERSUPPLY WILL BE "TEMPORARY" . . .** An executive vice president for a pulp importer exploded with, "I think some people are showing entirely too much concern over this. It is, at best, something that will be temporary and can be absorbed in exports. We are constantly finding more and more uses for pulp and paper products. Consumption will increase over the world. It's just a matter of time. Once these countries get going, you will again have a shortage. There's a shortage of trees in the world. North America has a good supply."

**1958 WILL BE CRITICAL . . .** "Anything that is coming on at the end of 1957 will be welcome," predicted the vice president of an exporting and importing pulp and paper concern. "From 1958 onward, I'm afraid that we will have newsprint coming out of our ears and there will be no problem of getting pulp."

**A NEWSPRINT EXEC SPEAKS . . .** In rebuttal, a newsprint sales executive stated, "I think that basically in relation to newsprint we will feel disruption only in certain areas of distribution. There has been a definite trend of newsprint production in the South, which has always been a purchaser not a producer. We think that in the future there will be still much newsprint production in the South and the disruption will affect only a small percentage of our paper that we are distributing there."

"The demand for newsprint is definitely related to world demand and can't be centered on just the U.S.A. market. World demand is far more important in our picture than it was previously because economic growth in the rest of the world seems to be going up at the same time that it is going up here. That's the first time that's happened since 1920. Effects of growth will certainly indicate there will be more paper shipped to foreign markets in the future than in the past.

"Even in the short range we do not feel that the U.S. is going to be in oversupply. (An APPA report shows a possibility of a 37% increase in newsprint production by the end of 1958.)

"There definitely is competition at this time for paper that should be coming to the U.S. If the world economy should continue to stay strong, we should have no trouble. Everyone is predicting that it will stay strong.

"In the long run there will probably be a shortage of paper. We are very confident of both the short and long range prospects."

**THE LONG TREND IS UP . . .** The president of a major pulp producer said, "We must be prepared at all times to meet the maximum demand of our customers. Prospects are that demand has to grow. There are bound to be peaks and valleys but generally the trend is that it will be upwards and upwards.

"We don't bet that kind of money





**One of Industry's New Mills Nears Completion . . .**

**STARTS UP THIS MONTH** . . . New $18,500,000 Antioch, Calif., mill of Crown Zellerbach Corp., nearing completion. The long building houses 260 in. Beloit Fourdrinier with about 400 tons per day capacity. Crane in foreground bears name of Eichlay Corp., of Pittsburgh and San Francisco, which is doing equipment installations, piping and electrical work. At right are three big Stebbinstile lined storage tanks—for high density pulp, for blending after screening and deckering, and for broke. Just to left of tanks are two E. D. Jones Hi-Lo Pulpers, to process the high density pulp from Canada, in case it becomes too dried up. They also will handle broke or any lap pulp that may be brought from the North. At far right can be seen the Fibreboard Products San Joaquin Division Mill.

**PULP "FOOTBALL STADIUM" AT ANTIOCH** . . . Portion of novel 170 ft. wide, 1,000 ft. long concrete pulp storage slab at Antioch mill of CZ. "Noodle pulp" brought in tanker from Elk Falls mill, B.C., 1,100 miles by sea, will be unloaded here. This has been nicknamed the "amphitheater" as well as "football stadium," and will hold about 6 shiploads. Left to right, beyond the slab, are water storage tank, surge tank and three Dorr-Oliver thickeners for handling incoming pulp. Bulldozer will push pulp off this slab onto long conveyors to mill. Of course, these cars won't be parked on slab when it goes into use.

(on expansion) unless we know that we can sell it. We might have to scramble, but we'll sell it."

One sales manager remarked that companies already embarked on expanded capacity projects and those whose programs are completed, are urging others to 'stop, look and listen.' Many are afraid, he added, that with the spotlight given the industry's expansion progress that many promoters and unwary financiers will step in.

**A WOOD MAN'S VIEWS** . . . A woodlands manager for a big company pointed to a map on his office wall and said, "We've been in the South for years. Here's our wood procurement area. But 'X' Pulp & Paper Company is looking at a site here and 'Y' Company has announced it will build over here. They're crazy! We've been in stiff competition for years with other mills in this area and now these two are coming smack dab in the middle of our procurement area. It's going to be rough. But we've been here a good many years and we feel that our know-how will give us an edge."

**"WE ARE ONLY HUMAN"** . . . A vice president for a large pulp broker company thinks, "there's going to be price cutting. After all, we're only human. But some place in the price drop someone will talk about stabilizing the market and it will probably stabilize at a lower level.

"Producers also may have to come to some arrangement on the kind of pulp that can be sold. Some place along the line companies will have to drop to 6 or even 5 days operations. This will take some courage."

A pulp salesman for an importing and exporting pulp and paper company warned: "Inventories at pulp mills this year are about double last year's, and I personally think they are going to stay that way. What's more, there's going to be tonnage coming out of people's ears. Production is going to have to slow down."

"The situation won't be rosy, but then no one's going to get hurt. The reason we are having all this expansion is that salesmen have done such a perfect job of selling; in fact they have more or less oversold.

**INTEGRATED MILL OFFICIAL IS OPTIMISTIC** . . . The general sales manager for paper of an integrated mill was optimistic. "It seems to me that with some four million tons of paper coming in by 1960 that the market is growing fast enough to absorb it. In fact there may even be a little shortage with the rate of growth of our population. Frankly, with the increased population I don't think there's anything to worry about.

"Just take one factor alone. Milk and related industries. Some have hesitated to switch to paper packaging because of heavy investments they have in bottle washing equipment. Once they dispense with this and go to paper and board products they will use considerably more of our production.

"There's no question about it, salesmen are the ones who will have to get out and sell.

**CONVERTERS ARE EXPANDING** . . . "Another important factor. There appears to be an expansion among converters across the country. I bet we'd be surprised if we knew how much tonnage converters will need. Just today I heard of three who are planning 50% increases in capacity. Today I was asked to supply 1,000 tons for an entirely new use of paper. Annual capacity would be around 2,000 tons.

"Actually, I don't personally think there's going to be overexpansion in paper. If all mills on 7-day operations were to drop to 6-days I don't think there would be enough production to meet demand. Seven day operations are not a healthy situation. You can't take proper care of your repairs and maintenance."

**VIEWS IN FAR WEST** . . . The executive vice president of a major Western producing company said he expects there will be some idle machine time, but in the long pull demand will catch up.

One long term planning executive of another big producer in the West says his company has reliable information that Census Bureau forecasts of population growth are far too conservative—too low.

The president of a Western pulp and paper firm said in newsprint and board there will be an over-supply temporarily, but most other grades are in good shape.

# Cooperation on Mill Rebuild Project

## At Bergstrom Paper Co. some 220 outsiders cooperated in carrying out No. 3 machine rebuild

• Some of the things that happened when Bergstrom Paper Co., Neenah, Wis., recently rebuilt its No. 3 Fourdrinier machine are shown in the pictures accompaning this article.

The Bergstrom project proved to be a typical example in this industry of how closely the pulp and paper mill staffs and engineers and specialists from engineering firms and supply companies cooperate in carrying out improvements and expansion.

Cooperative research and engineering, and then cooperation in construction and installation between the mills and their suppliers is perhaps more evident in this industry than others. It is a "must" in the relatively smaller mills, such as the Bergstrom mill which runs over 100 tons a day of its Valkyrie supercalendered book, eggshell and English finish papers, as well as 65 tons daily of deinked pulp. But it also is true in even larger scope in many big mills.

It was interesting that in connection with its No. 3 rebuild job, the Bergstrom company took a rather unusual step by publishing a page article in its company magazine, "Rolls and Reams," in which it generously gave credit to the engineers and technicians from supply and engineering firms who assisted.

The article noted that there were 220 persons—"unfamiliar faces around our mill"—who were working on the various jobs that went into the rebuild project. These were from 13 outside companies.

**TYPICAL OF MILL PROJECTS . . .** This is probably typical of these rebuilds, which are now being done in many other mills. The Bergstrom publication listed two each from Beloit Iron Works, Improved Machinery Inc., Stowe-Woodward and Reliance Electric & Manufacturing Co., and three from Chemical Linings. From the Chas. T. Main engineering firm in Boston came two electricians and two erection engineers. The local Keil and Werner Electric firm had 40 on the job. Fluor Brothers sent in 10 sheet metal crews and 70 millwrights and carpenters. There were nine painters, 20 plumbers, four sandblasters and four sheet metal workers. A trucking firm used 48 men.

Of course, there were other suppliers who gave assistance but did not need to assign their own staff to the project.

**COMPLIMENT FOR SUPPLIERS . . .** "It was a pleasure to watch the remodelling of our No. 3 machine and to see the skill with which it was done," commented Nathan H. Bergstrom, president and general manager of the 80 year old company, founded by his Norway-born father, first of three Dedric W. Bergstroms. The grandson Dedric is treasurer and purchasing agent, and with Foster P. Doane, Jr., vice president and production manager, worked closely on the project.

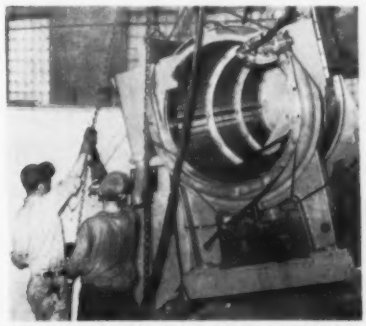


**MEN ON SCAFFOLD** patching brickwork on Bergstrom's 180 ft. smokestack attracted stares of many passers-by.

"For all intents and purposes, we have a new paper machine," said Nathan Bergstrom. "The wholehearted cooperation and help from various outside contractors deserves a great deal of commendation. We could not have received better service from them."

This is the second machine rebuild done at Bergstrom—"now we have two shiny paper machines buzzing along." The two Fourdriniers are 142 in. (131 in. trim) and 157 in. (146 in. trim). They are 220 ft. long. Earlier number machines have been retired which explain No. 3 as the designation for the latest rebuilt machine.

A new finishing plant, 280 x 280 ft., and one story high, with a two-story end structure for offices, etc., has been southwest of Neenah. All air is washed and humidified. Five freight cars and three large semi-trailers can be loaded at one time.



**AT BERGSTROM DURING REBUILD** . . . Bird Machine Co. screen is hoisted into position.



**NEW WIRE** on cylinder roll is put on, with assistance from CARL BABBITTS and EUGENE MEYER.



**AFTER NEW WIRE** had been put on the cylinder roll, it had to be filed by hand to insure smoothness.



**SIXTY YEARS AGO . . .** Thilmany Pulp & Paper Co. looked like this in 1897. This is on site where Upper Mill now stands.



**TODAY . . .** Thilmany extends from one end to the other of island in Fox River at Kaukauna, Wis. The so-called Upper Mill (at extreme left end of island) is now all converting, and Lower Mill (right foreground) includes all paper machines, bag factory and pulp mill. No. 11 paper machine is in long building at lower right. Town of Kaukauna is in distance, at top of picture.

For enlarged view of this picture, see cover.

***A PULP & PAPER SPECIAL FIELD REPORT***

# An "Old" Kraft Mill Is Made "New"

## Thilmany pioneers new processes and equipment, ever searching for ways to up-grade, diversify and specialize

● There's always something new at Thilmany. So much has happened in five years, this is virtually the story of a new modern mill.

Even though it is the second oldest kraft woodpulping mill in the western hemisphere (1883), it is one of the most modern and it is famous as a trail-blazer for new equipment and new processes.

In a town also famous for its aged cheddar, Thilmany is one of the great specialty mills of America—and one of the most diversified. This fact is even more remarkable because Thilmany is also one of the largest Northern (U.S.) kraft mills. In kraft, the pattern has usually been to go to mass production of relatively few products, instead of diversification.

But higher costs for almost everything makes it impossible for Thilmany Pulp & Paper Co., of Kaukauna, Wis., to compete with the big Southern kraft mills on such a basis. So it went in for specialties—and how!

Thilmany makes around 225 tons a day of paper. It converts this into 5,200 different kinds of paper products and 2,000 different kinds of bags.

THILCO P&P COMPANY PRODUCTS

**THILMANY IS PRONOUNCED "TIL-MON-NEE." The "h" is silent and the accent is on the first syllable.**



**THILMANY'S TOP MEN IN CONFERENCE** (left to right): CHARLES R. SEABORNE, Executive Vice President; KARL E. STANSBURY, Chairman of Board; ELMER H. JENNINGS, President; GUY E. McCORISON, Vice President in charge of Sales; and E. R. (TED) SUTHERLAND, Secretary-Treasurer and General Purchasing Agent.

It sells a little of its kraft pulp and buys other grades of pulp, such as sulfite for glassine grades. Thilmany makes hundreds of special trademarked wrapping papers for steel companies, durable goods manufacturers, etc., also magazine wrapping, a multitude of decorated papers, asphalted, polyethylene laminated or coated and waxed specialties—most of these in both kraft or glassine. It makes bags with varied treatments and all kinds of gadgets. Even a special wrapping for stainless steel carried in open gondola cars is now being made at this Fox River valley mill.

**WHAT CAME BEFORE . . .** Twice since World War II, PULP & PAPER has brought the news of Thilmany operational improvements "up-to-date." The story of the first venturi recovery gas scrubber in the industry was exclusively reported in these pages. Seven years later a similar but larger 90% efficient scrubbing unit went in, and in just the last year or two, some 20 mills have ordered venturi scrubbers to clean stack gases while recovering both chemicals and heat.

Next, PULP & PAPER brought up-to-date the modernization of Thilmany's wood handling and wood preparation systems. Jack and lodgepole pine from Lake States, Canada and Montana are handled in the yard by two 40-ton American Hoist diesel electric cranes equipped with 1¼-cord Blaw-Knox pulpwood grapples. Eight ft. wood is soaked in a 4-channel 50 by 250 ft. hot pond. About 400 cords a day are produced in the new post-war woodrooms, where main units are a 12 by 45 ft. Fibre Making Processes drum barker, an 88-in. 10-knife Murray chipper, two 5 by 14 ft. Murray horizontal chip screens and a 36-in. 4-knife rechipper and Link-Belt conveyors.

With this streamlined rebuilding of the woodroom in 1950, Thilmany pioneered the barking and chipping of pulpwood in 8 ft. lengths which in addition to producing better barking and more uniform chips has resulted in considerable wood and labor savings.

**THE NEW UNITS . . .** That was just the beginning of recent improvements at Thilmany. This story aims to bring these changes of the past five years "up-to-date." While others built new mills, Thilmany virtually rebuilt its old one on a comparable scale.

First came a Swenson 3-drum brown stock washing system, expanded with a 4th drum this year. Then, in 1953, a Beloit 135-in. Fourdrinier machine and a new Impco 10-line flat screen room. The new Babcock & Wilcox 250 ton recovery boiler and venturi scrubber were added late that year. A No. 9 power boiler is now on order.

Late in 1954 a 150 ft. long lime kiln was added, and then in 1955 a new A. O. Smith tumbling digester, rebuild of two machines, improvements on others, a new slush pulping system, Bauer Centri-Cleaners and Bird Dirtecs, more Morden Stock-Makers.

Converting kept up with manufacturing, with a new Kidder press, waxing and polyethylene machines. Converting has been modernized, consolidated in old paper machine rooms, and converting capacity greatly increased.

New warehouses were added in

## Always Something New at Thilmany

**There's always something new being made at Thilmany. Also—always something new being added at this second oldest kraft mill in America.**

- **Better barking and chipping is saving wood and labor.**
- **A record size dryer is coming from Europe for new 165 in. Fourdrinier.**
- **Black liquor venturi scrubber is pioneered here and a new improved unit shows recovery efficiency at 90%.**
- **New shot-cleaning system replaces steam for cleaning portions of recovery plant.**
- **One of four new digesters is operating. New type steel used.**
- **Expands brown stock washing, which attracts wide industry interest. Uses one of first color-graphic panels.**
- **Washes 250 tons to 20 lbs. per ton residual soda; returns 18% solids to evaporators.**
- **Screen room "bottleneck" is broken with new installations and processing.**
- **Versatile No. 11 machine, for glassine and kraft, gets new design suction boxes, first pressure inlet for glassine, other high efficiency features.**
- **Other machines are rebuilt, improved, speeded up.**
- **Converting division keeps pace with additions and new units.**

1954 and 1955. First was a 20,000 sq. ft. unit adjacent to converting. Last year another 50,000 sq. ft. were provided in a new two winged unit. Both are concrete and steel, with precast concrete roofs.

Even the offices burst their seams. A new 48 by 135 ft. addition in the past year was laid across the top of an old machine room—a new second story with thermopane windows, Wyscolite plastic skydomes, letting in natural light, air-conditioning and Hauserman movable partitions. A cozy lounging area and coffee room is a popular part of this addition.

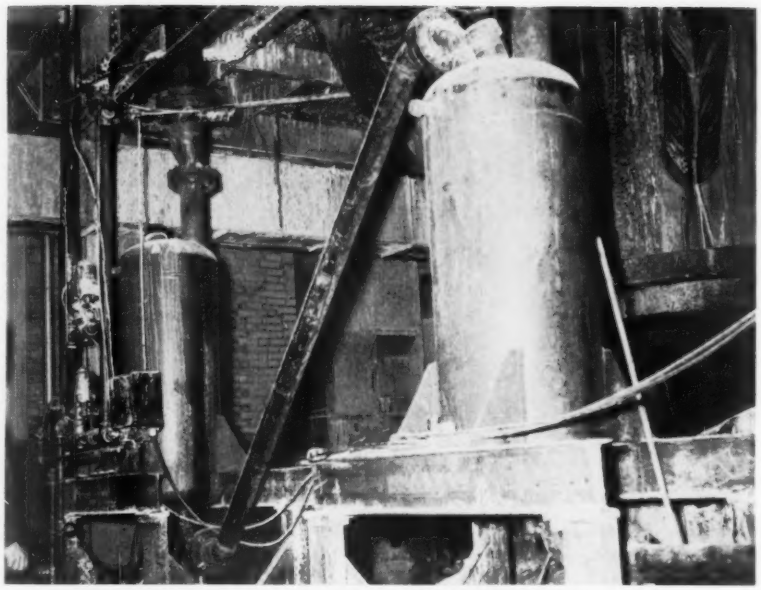
**BIG DRYER FROM EUROPE . . .** Thilmany has purchased a new 165 in. (147 in. trim) Black-Clawson Yankee Fourdrinier for manufacture of kraft specialty MG paper at speeds up to 1200 fpm. This will be No. 12 machine, actually the seventh operating today, the first five machines of Thilmany's 73-year history being retired. (These early Thilmany machines, or major portions of them, are still making paper in Mexico, China, Ohio, Ireland, and one is somewhere in South America). The six machines now in operation are making twice as much paper as were eight machines in operation before the war.

The new machine will have a 15 ft. diameter by 168 in. face high tensile alloy castiron dryer made by Beatty-Jackson Ltd., England, and being delivered via ocean and inland waters. It will be the largest dryer in the U.S.A. on MG papers. No. 12 will start up in mid-1957.

That will be the third new machine at Thilmany in just 8 years, the fourth in 15 years. No. 11 was added in 1953, No. 10 in 1948 and No. 9 in 1942. The present six Fourdriniers include four Yankees and two MF machines, four being 135 in. and the others, 99 and 110. Milestones of Thilmany growth may be reckoned by the power turbines, too, a 6,000-ton unit being put on the line Dec. 6, 1951, a 7,500 kw unit on Dec. 27, 1953.

**PIONEERS RECOVERY PLANT EQUIPMENT . . .** For the newest practices at Thilmany, the place to start is the expanding recovery department. Here is the new black liquor venturi scrubber and also a new shot cleaning system which has replaced steam for cleaning portions of the recovery unit.

Here, also, Thilmany has lengthened out its evaporator to accommodate 26 ft. tubes and also put in additional longer tubes. Now its Swenson 5-body quintuple effect unit will process black liquor from 250 tons of pulp

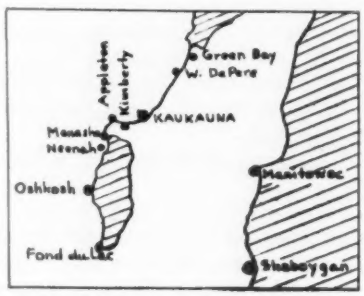


**NEW SHOT CLEANING SYSTEM FOR THILMANY BOILER . . .** First on this continent except for an older type process in one East Coast mill, it substitutes for steam lancing. Here are two shot storage tanks at bottom of Babcock & Wilcox air heater. Shot collects chemical dust as shot falls through air heater tubes. Shot is returned to collector box at top of heater to do work again, while dust goes in gas stream to venturi scrubber.

production. Design capacity evaporation rate was increased from 91,500 pph to 115,000 pph.

The new B&W No. 8 recovery boiler is a 250 ton, 600 psi, 700°F. unit. The original venturi scrubber, invented by Mark Anthony of Pease, Anthony Co., first reported in PULP & PAPER, water-washed the recovery stack gases from a 120-ton B&W unit from 1947 to 1953. B&W took over the scrubber rights and built the first new type unit for the new Thilmany boiler. Washing now is accomplished with black liquor instead of with water. Its chemical recovery efficiency is rated at 90%.

The new evaporative venturi scrubber takes the flue gas leaving the boiler unit and scrubs it with concentrated black liquor from the evaporators. In so doing, it collects the salt cake and further concentrates the black liquor so that it may be burned in the recovery unit.



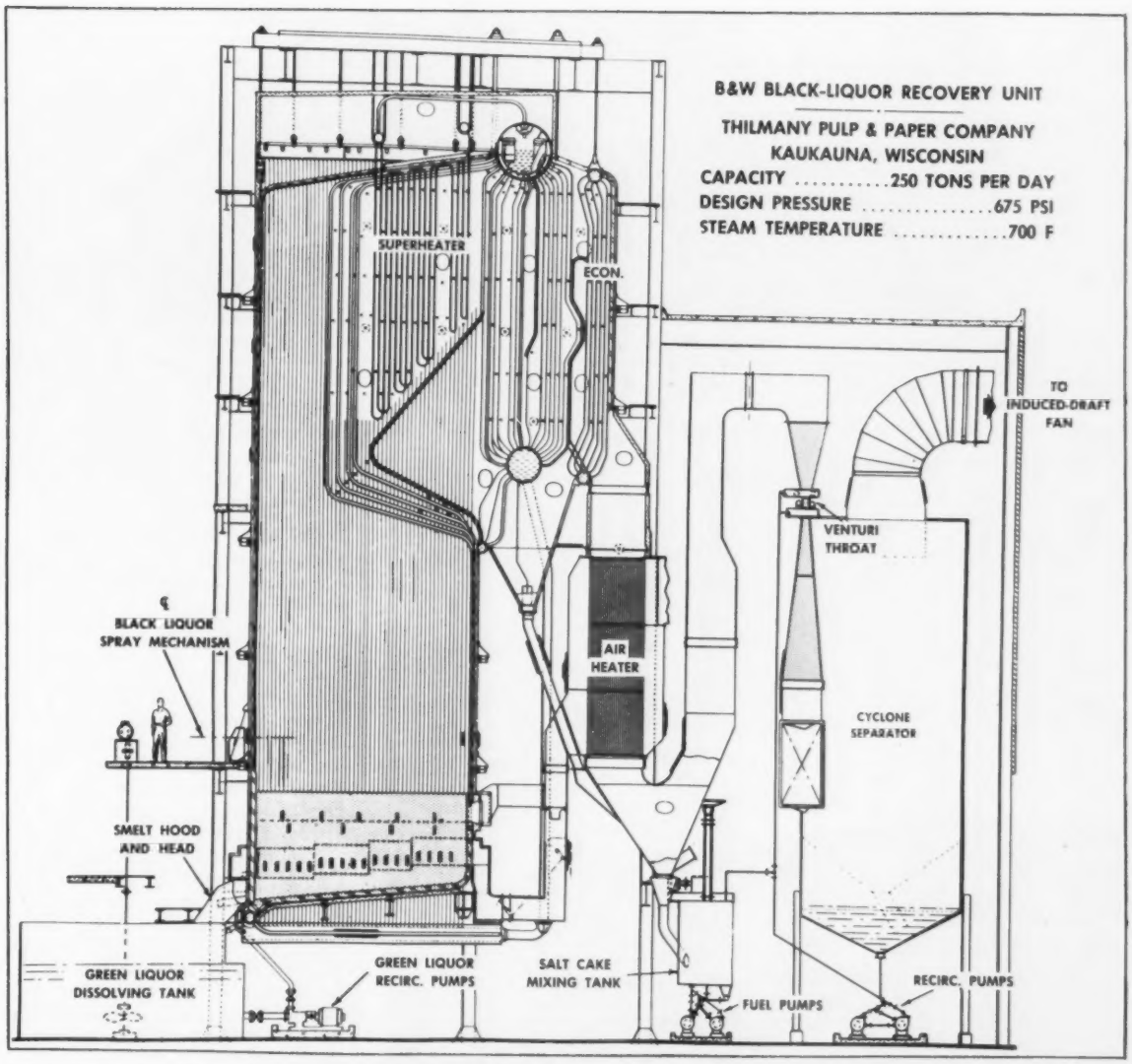

**THE HOME OF THILMANY—KAUKAUNA**

An important component is a venturi throat where velocity of flue gas is greatly accelerated and the liquor injected into it. Atomizing of liquor results in intimate mixing of the dust and the evaporation of moisture from the liquor. Next is a cyclone separator for removing droplets of combined liquor and salt cake from the gas so that only clean gas is taken to the induced draft fan system.

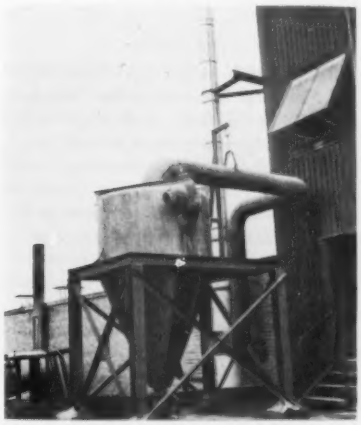
This innovation of venturi and cyclone apparatus replaces conventional direct contact evaporator and electrostatic precipitator. Sturdevant 1D fans, Worthington pumps, B&W-Diamond soot blowing, Bailey Meter instrumentation are provided on the new boiler, and will be on the new one on order. Falk gears are used on drives and agitators. Also Yarnall-Waring tandem blow-off valves, Yarway Hi-lo Alarm water column with Yarway flat glass water gauges.

**INTRODUCES NEW SHOT-CLEANING SYSTEM . . .** In the summer of 1955, Thilmay started the first shot-cleaning of a recovery boiler on this continent, except for an older Swedish process used in one east coast mill. The Thilmany process, devices by Babcock & Wilcox engineers, was a refinement of the Swedish system.

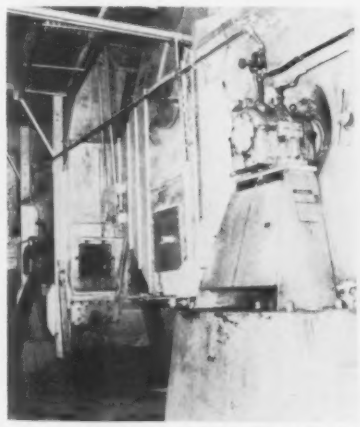
What it did first at Thilmany was to clean the air heater and next, also the economizer section in back of the boiler. Next step is to clean also the middle bank or second pass of the boiler. A new design for boilers was



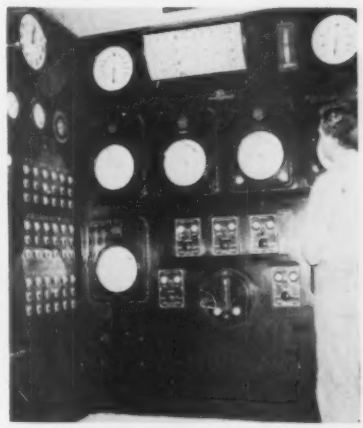

FLOW DIAGRAM OF BABCOCK & WILCOX BLACK LIQUOR RECOVERY UNIT.



**FOR TURPENTINE RECOVERY . . .** On roof of new Babcock & Wilcox recovery plant, Thilmany has this cyclone separator. Only clean gas goes to induced draft fan system.



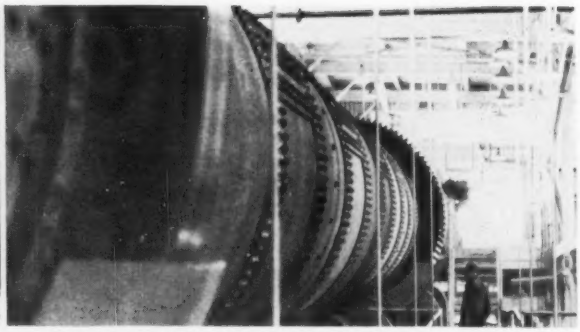
**FANS FOR NEW RECOVERY PLANT . . .** Sturtevant 1D fans, one in right foreground and one at far left are provided for the Babcock & Wilcox recovery unit at Thilmany.



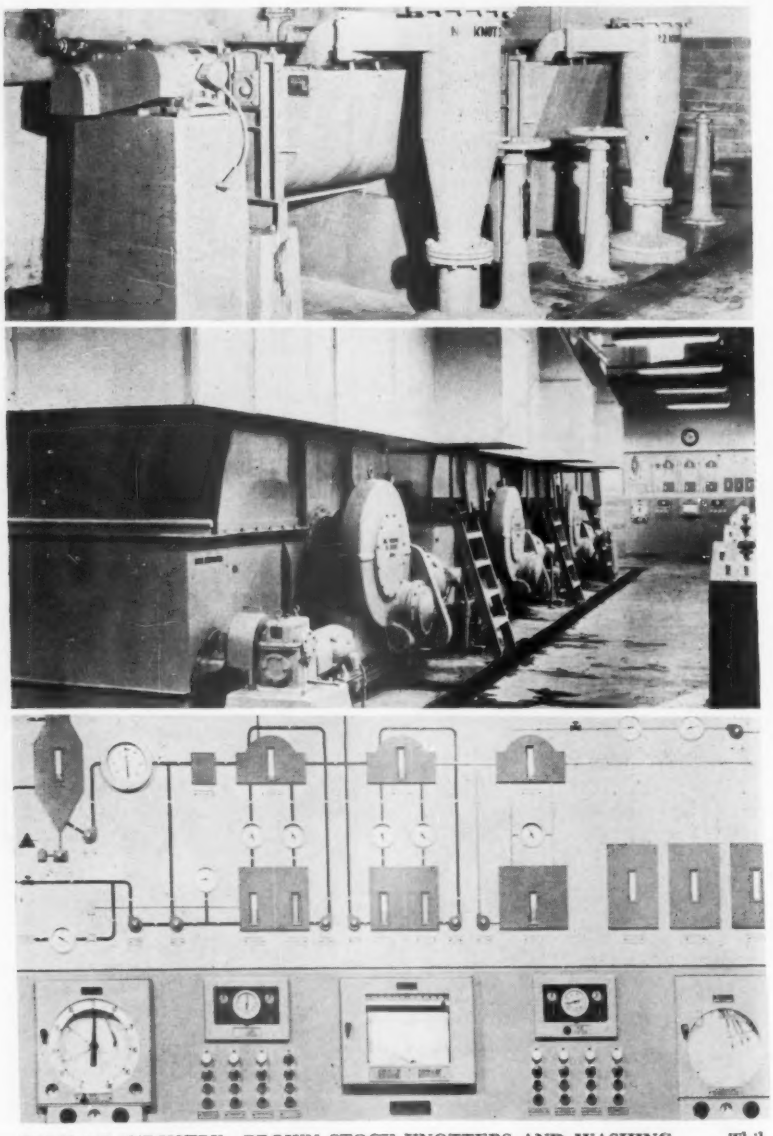
**CONTROLS FOR RECOVERY UNIT . . .** Bailey Meter Co. instrumentation gives completely automatic control here for the new recovery installation.



**NEWEST OF THILMANY'S TUMBLING DIGESTERS . . .** This A. O. Smith carbon grade B modified steel vessel was shipped complete on flatcar and erected by Thilmany crew.



**OIL-FIRED KILN FOR LIME BURNING . . .** New Allis-Chalmers chain to remove heat from gas and break up particles is inside this 8 by 150 ft. long Vulcan kiln.



**TALK OF INDUSTRY—BROWN STOCK KNOTTERS AND WASHING . . .** Thilmany attracted wide interest in kraft world with its brown stock washing. Top—Bird Jonsson knotters precede washing. Knots are diluted in black liquor and pumped back into digesters to be cooked again. Middle—Swenson Nyman pulp washing system with Minneapolis-Honeywell Colorgraphic panel board in background. Lower—Closeup of M-H Colorgraphic panel.

necessary to further extend the cleaning system with shot-cleaning of superheater, boiler economizer and all heater surfaces.

**HOW SHOT SYSTEM WORKS . . .** Formerly at Thilmany, the practice was to steam lance every hour through the air heater.

But due to a general shortage of steam, the extra load was too great and this led to development of the shot cleaning system. The ¼ in. shot loosens chemical dust as it falls by gravity through the economizer and air heater sections. At the bottom, shot is collected in twin blow tanks. Dust is carried in gas stream to the venturi scrubber.

Compressed air is admitted through these tanks periodically and moves the shot back up to the top of the unit to a storage tank from which it starts another cleaning cycle. The shot is elutriated or washed free of dust by primary air at the bottom of air heater. The dust is then removed from the gas stream by the venturi scrubber.

Principal advantage is that steam, formerly used in lancing these areas, is saved and steam demand rate has leveled off considerably.

**LIME KILN AND CAUSTICIZING . . .** Beyond the evaporators is the oil-fired 8 by 150 ft. Vulcan lime kiln installed over a year ago with a new Allis-Chalmers chain section, which takes heat out of the gas, breaks up particles and aids evaporation. A new Bird centrifuge thickens sludge and a Multiclone cleaning system is used for scrubbing exit gases. Thilmany's staff designed and built the kiln house, a Robertson Q panel enclosure with concrete foundation and precast concrete roof.

For causticizing, Thilmany employs a continuous slaker, two continuous causticizers and 10 batch settling tanks. The stainless steel slaker, fabricated in Thilmany shops, is an improved version of the slaker designed

by Thilmany and installed at the hot end of the old 6 by 120 ft. kiln in 1946.

**FOUR NEW DIGESTERS . . .** Thilmany cooks pulp in five 1925 cu. ft. tumbling type digesters, one of which is a new A. O. Smith Corp. carbon grade B modified steel vessel. It was first used in Aug. 1955. It was shipped complete on flatcar from Milwaukee and erected by the Thilmany construction crew. It had been stress-relieved and radio-graphed at the A. O. Smith plant. All digesters are equipped with 6-in. Fairbanks Spheroid Ball blow valves. Link-Belt conveyors carry chips to digesters. There will be three more tumbling digester replacements. One will be an A. O. Smith digester made with its new Oxyrim steel. Two others will be by Blaw-Knox using Lukens so-called "digester steel."

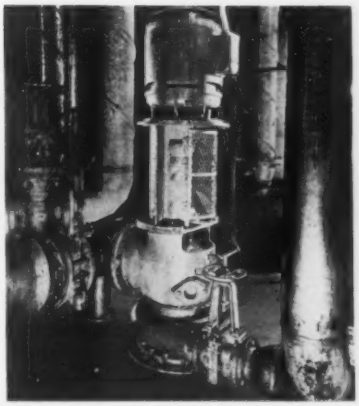
Taylor control instruments are used in digester controls. Valves for white and black liquor to digester are Crane and Walworth. Heat is recovered from each digester blow through a Swenson blow heat condenser. A new blow tank is by Northeastern Boiler Works of Green Bay. Accomplished by 48 cooks, daily pulp production is 225 tons.

**BLAZES "NEW TRAILS" IN BROWN STOCK WASHING . . .** Brown stock washing, as it is practiced at Thilmany, has attracted considerable interest in the kraft world.

It was one of the first two mills to put in a color-graphic central control panel, developed and equipped by Minneapolis-Honeywell. The washing system, now being expanded to a 5th stage, but using only four drums, is notable for its low dilution factor. A minimum of dilution water is used to attain high cleanliness. At present the system is washing 250 tons of kraft daily to a residual soda content of less than 20 lbs. per ton with about 285 gpm of hot water and returning 18% solid black liquor to evaporators.

The plan was to wash 200 tons per day in five stages on three drums when the original Swenson-Nyman system was installed. Instead, four stages of washing were done on the three drums and very clean pulp was produced. Now, with the new Swenson washer, there are five stages with four drums and capacity will reach 250 tons.

All washers are steel with No. 304 stainless steel wires and are supplied with steam doctor blades for removal of pulp and conventional repulpers. Transite washer hoods were made at Thilmany and have American blower fans with air supply by Trane Corp., LaCrosse, Wis. The filtrate tanks of carbon steel were made by Thilmany, as well as three steel high density pulp storage tanks, 30 ft. diameter by 40 ft. high. These provide flexibility by permitting the cooking, washing and storage of three grades of pulp with only one line of washers.



**FROM BROWN STOCK STORAGE TO SCREENS . . .** Thilmany stock is brought down from 14% to 5% by Allis-Chalmers vertical pumps. This 16 x 6 in. TYG pump is rated at 1,000 gpm, 70 ft. head, 1,160 rpm, driven by 50 hp motor.



**MANLIFT AT THILMANY . . .** This manlift by Allis-Chalmers is in digester building. Man is dismounting at an intermediate level.

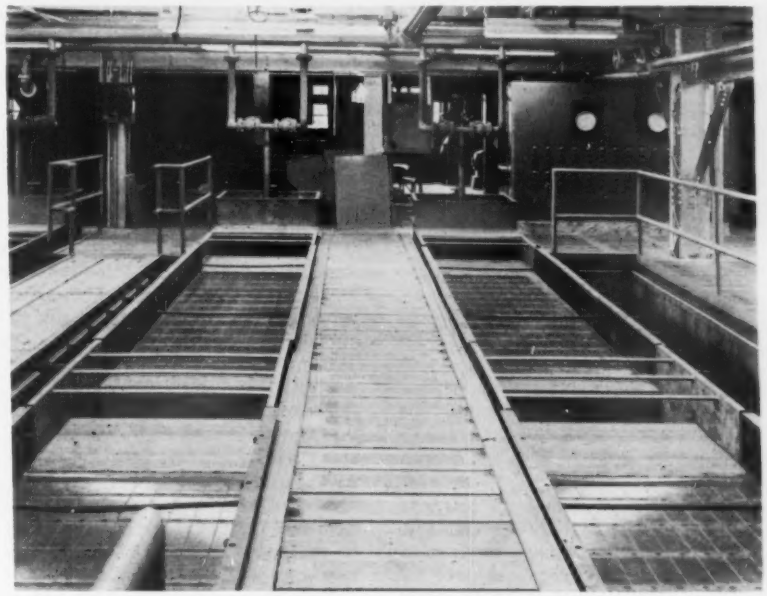
Washed pulp is stored at 14% consistency.

The system is equipped with two Bird Jonsson knotters. Knots are diluted in black liquor and pumped back into the digesters as a partial liquor supply and cooked again.

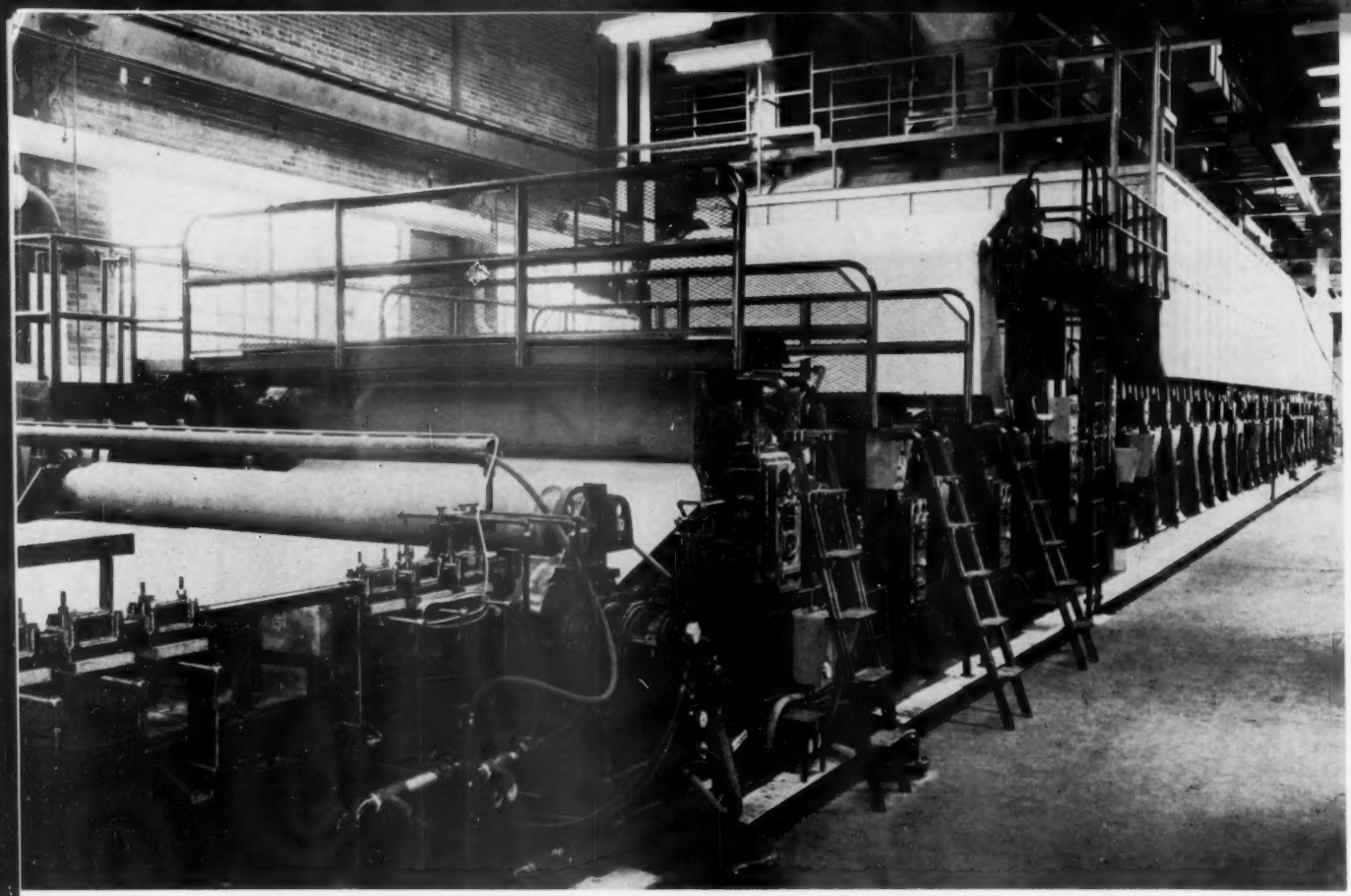
Reliance Electric & Engineering Co. dc washer drives with MG sets are housed in a pressurized room remote from the washers. Reducing sets are Cleveland worm gear units. Valves are Walworth; pumping, Allis-Chalmers.

**SCREENING WITH NEW EQUIPMENT . . .** Considerable dilution takes place between the brown stock storage and screening. From 14%, stock is brought down to 5% in pumping with Allis-Chalmers vertical stock pumps to Askania regulators ahead of the screens. These regulators further reduce the stock to ½% going to the screens.

The old screen room had been a bottleneck, with antiquated screens of low capacity and high maintenance. To gear this operation up, the new room consists of 10 lines (26 plates each) of Impco flat screens with Magnus Metal stainless steel plates. Eight rows are operated as primary screens and two as secondary. All flow boxes, vats and piping were fabricated of



**NEW SCREEN ROOM AT THILMANY . . .** Old room had been a bottleneck. New one consists of 10 lines of Impco flat screens with Magnus Metal stainless steel screen plates.



**APPROACHING 1200 FPM ON KRAFT AT THILMANY . . .** No. 11 Beloit Machine, a straight Fourdrinier with Reliance 400 hp, d.c. drive. It has a Hewitt lumpbreaker. Glassine is also made on this machine.

No. 304 stainless steel by Felker Bros. with valves by Crane. A Bauer Bros. double disc refiner reworks secondary rejects from the screen room. Allis-Chalmers circulating pumps are used in screening with a pressurized header beneath the floor.

After screening, 6 ft. 6 in. diameter by 16 ft. Impco valveless thickener has been added. All piping to the thickener is stainless steel. After the thickener, stock goes through a DeZurik regulator, to a Chemical Linings tile chest with Impco agitation and Marathon Electric motors—Falk speed reducers. Shartle HMSS pumps move the 7% consistency stock through Transite pipe to the beaters.

**THREE WAYS FOR STOCK . . .** From the screen room, stock may proceed in any one of three directions—to (1) bleach plant, or (2) unbleached to the wet room, or (3) unbleached to paper machines.

Up to 90 tons a day of pulp goes through bleaching, which consists of two stages—chlorination and hypochlorite. Equipment consists of one batch chlorinator, two batch-type bleach cells, one 6 by 6 ft. Oliver Young filter and two 5 by 5 ft. Impco washers.

The wet room capacity is 180 tons daily of wet lap and 150 tons of kraft slush lapping. Equipment consists of four 72-in. Rogers wet machines.

The beater room, third possible destination after screening and thickening, serves Nos. 7, 8, 9, 10 and 11 machines. To carry pulp to a desired beater, a button is pushed and all electric valves carry pulp to wherever it is wanted. Five-way Shartle electrified plug valves are used. It takes only 2½ minutes to fill a beater. For other machines, stock preparation is ahead of the machines.

**FIRST DESCRIPTION OF NO. 11 . . .** Although green-painted No. 11 machine has been operating over three years, this is the first descriptive story about it. Changes and improvements have been made since then, and it is still the "new" machine at Thilmany and the mill's big producer, making both glassine and kraft.

Like No. 9, built in 1942, No. 11 is a straight Beloit Fourdrinier and both trim 120 in. No. 11 runs up to 1100 fpm on 40 to 50 lb. kraft (basis wt. range from 20 to 150 lbs.), and up to 500 fpm on 20 to 60 lb. basis wt. range glassine. It is gradually approaching design speed of 1200 fpm. It is driven by a 400 hp Reliance Electric dc drive.

Stock preparation, for Thilmany kraft or purchased sulfite for glassine, starts with a Shartle 2,000 lb. capacity Shartle-Dilts Hydrapulper. Next are two E. D. Jones & Sons stainless steel tub Bertram beaters. Stock goes to chests tile-lined by Chemical Linings, Inc. with Shartle agitators.

Next comes a battery of four Morden Stock-Makers (three of 200 hp, and one, 150 hp) and one Jones Imperial jordan, and these all operate in series.

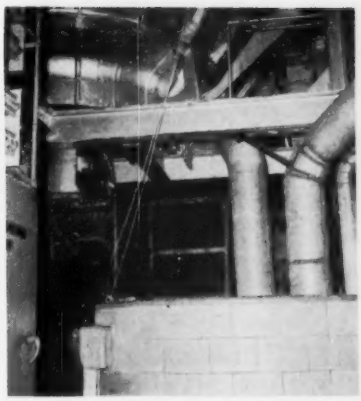
Then, especially used for glassine or other lightweight papers, stock goes through eight Bird Centrifiners, for dirt removal. A DeZurik consistency regulator is next.

The Beloit air-cushioned pressure inlet is another "first" for Thilmany, being the first in the world to be used for glassine. The 100 ft. long wire has 13 suction boxes on it, an unusual number for glassine, which is slow hydrating and hard to get water out of stock.

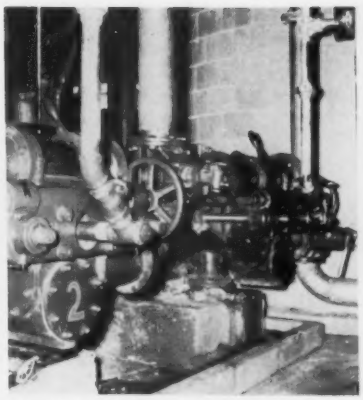
Appleton (Wis.) Wood Products made the suction boxes of Lo-Vac Reslin plastic material with a radically different design of slots, to reduce plugging, and wide open covers. Lower vacuum is used but greater water removal is attained. Four Nash vacuum pumps serve No. 11 and Broughton vacuum control is used.

A dandy roll is run on the heavier weight papers. A Hewitt Machine Co. lumpbreaker is used. Beloit built the 30 in. diameter couch. A 4-press section is needed for glassine, though it would not be for kraft. First is a suction press with brass shell, then two plain presses and the fourth is a reverse press. Manhattan covered top rolls with Rubroc and bottom rolls with rubber. There are two Bird Vickery felt conditioners on each felt.

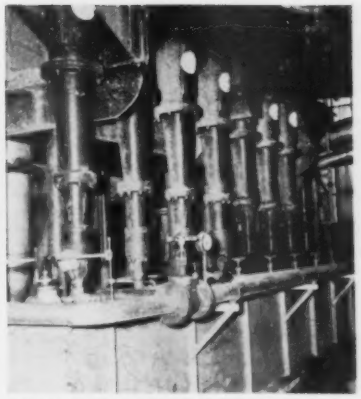
A smoothing press comes next. Then, three sections of dryers—pre-



**FOR GLASSINE, A HYDRAPULPER . . .** A 2,000 lb. capacity Shartle-Dilts Hydrapulper first prepares Thilmany kraft or purchased sulfite for glassine, before it goes to Jones Bertram beaters. Below Hydrapulper is Chemical Linings tile storage chest.



**ONE OF FOUR STOCK-MAKERS . . .** All four Morden Stock-Makers are ahead of the No. 11 Fourdrinier machine at Thilmany, which makes both kraft paper and glassine.



**CLEANS STOCK FOR NO. 9 . . .** In addition to rebuilding and speeding up No. 9 machine, Thilmany installed this battery of 10 Bauer Centri-Cleaners. Products are all kraft specialties.

dryers, intermediate and after-dryers. In all, there are 33 paper dryers of 60 in. diameter, and seven felt dryers. Between intermediate and after-dryers is a size press. The brass roll is by Beloit and top roll is rubber covered by Manhattan.

**AUXILIARIES FOR NO. 11 . . .** One big Transite hood in panels covers the dryer sections, built by Thilmany's shop. Fans are by American Blower and fans for air supply and coils are by Trane Corp. The Trane centrifugal fan is used to take in 100% fresh air. This is then moved through a bank of filters and finally through a rack of coils. From there the conditioned air is discharged into the room. Foxboro instruments are used for dryer temperature control.

The Ross-Midwest Fulton drainage system easily attains its guaranteed 98% efficiency, say Thilmany operators. It is automatically controlled with Foxboro instruments and valves.

Next unit on the machine proper is a 9-roll Beloit calender stack. Between this and the Beloit reel is a new Industrial Nucleonics AccuRay scanner which automatically measures and records basic weight variations across the machine every four minutes.

The reel has a quick takeup and is followed by a 3,500 fpm maximum speed Beloit 120 in. trim winder, driven by Reliance Electric dc double-drum 80 hp drive.

The Reliance drive for the machine proper is located in the middle of a double extended shaft. It is a 400 hp direct current motor. A 75 hp Reliance amplidyne helper drive is on the press section. Beloit hypoid reducers, air brakes, air clutches and inching devices are supplied.

The Shartle broke beater is directly below the winder. Allis-Chalmers and Goulds supplied all stock pumps and the 5,500 gpm fan pump is Goulds. Stock valves here are by Crane and Record.

The machine has run as high as 100 tons a day on kraft and it has proved very versatile and satisfactory, according to operators.

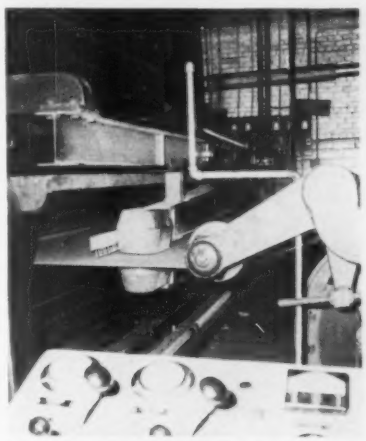
The building is an extension of housing for No. 9 so it now accommodates both machines, and it is a masonry structure, on structural steel frame.

**REBUILT OTHER MACHINES . . .** To increase production, Thilmany has improved other machines.

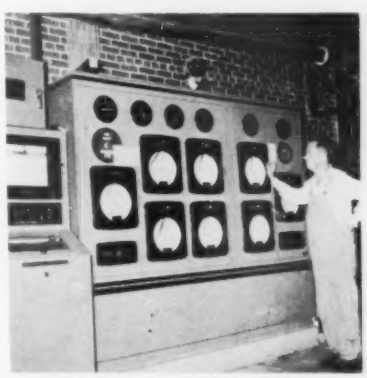
No. 9, also trimming 120 in., has a design speed now of 1,000 fpm. A battery of ten Bauer Centri-Cleaners were installed ahead of it for cleaning stock. The product of No. 9 is entirely kraft specialties. It is also served by Morden Stock-Makers, has Foxboro temperature controls and the Ross Midwest-Fulton drainage. A G.E. 400 hp steam turbine drives No. 9.

Within the past year, the wet end of No. 6 Yankee machine also was rebuilt by Beloit and its pressure inlet was installed. This is a 110 in. machine with 100 in. trim, making waxing stock and kraft specialties and its top speed now is 750 fpm. New Bird Dirtecs were installed ahead of it, 10 primary and 10 secondary. It has a new Beloit suction couch and dual press, new Nash vacuum pumps and an all stainless piping and Goulds fan pump of 3500 gpm capacity.

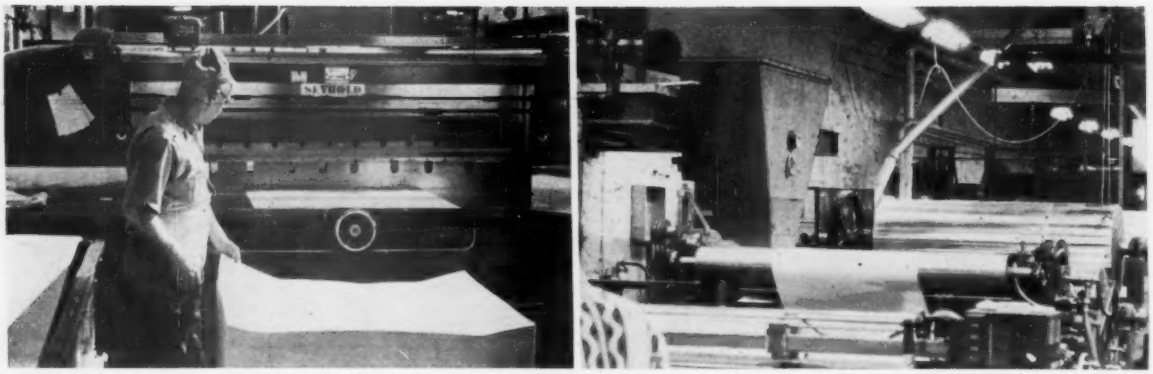
One of the new Allis-Chalmers vertical centrifugal pumps, of 1200 gpm capacity, was added to pump from beater chest to No. 6 machine chest. A new DeZurik V-port stuffgate control was provided.



**MEASURES BASIC WEIGHT . . .** Industrial Nucleonics AccuRay scanner—which is getting lots of publicity in a cigarette company's advertising—automatically measures and records basic weight variations across No. 11 machine at Thilmany every 4 minutes. In foreground is operating table, calenders on left.



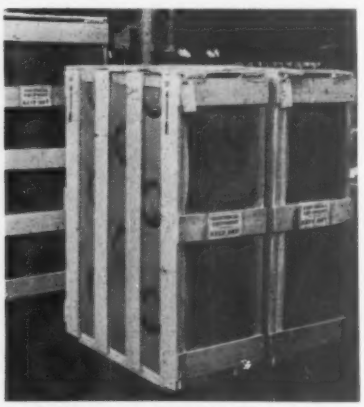
**CONTROLS AND RECORDERS FOR NO. 11 . . .** At left is recording machine for Industrial Nucleonics scanner for basic weight control. At right, Backtender ROBERT HEINDEL is checking the Foxboro panel for dryer steam and dryer end controls.



**ALWAYS SOMETHING NEW . . .** Thilmany is continually adding equipment and even buildings, it seems, and the island still holds them. Left, new Seybold 72 in. hydraulic trimmer in finishing department, with HELMER DAMRO keeping his eye on it, watching automatic spacing. Right, the wax department gets a new squeeze-roll 72 in. waxer with Dilts main coating section, Johnstone constant tension unwinds, Westinghouse edge guide and Reliance drive.



**A NEW PAPER USE . . .** Furniture shipping regulations were changed so this new Thilmany specialty can be used. Used to require inner and outer waterproof sheets. Now a non-staining laminant is used instead of asphalt laminated sheet.



**EXAMPLE OF TRADEMARKING . . .** Thilmany makes hundreds of trademarked sheets like this reinforced waterproof asphalt laminated kraft wrap for Westinghouse electric motors.

A little over a year ago, important improvements also were made on the 135 in. No. 8 Fourdrinier. This machine trims 120 in. and makes many grades of kraft specialties. Three new Morden Stock-Makers prepare its stock, along with a Jones jordan. It has a new suction couch, and its top speed is now 900 fpm.

Like No. 6, on which recent work has been done, Nos. 7, 8 and 10 are likewise combination Yankees.

No. 8 is a Rice Barton machine with 265 hp General Electric steam turbine drive and trims 120 in. and reaches speeds of 800 fpm. No. 10 is a Beloit with a 310 hp G.E. steam turbine and top speed of 1000 fpm and trims 120 in. They both have Morden Stock-Makers for refining, Bird Dirtecs and Valley head-boxes. Both produce MG papers.

**POWER ADDITIONS . . .** Two new recently installed General Electric steam driven turbo-generators have been installed in a new turbine room. As a result No. 7 Babcock & Wilcox power boiler, installed in 1948, now operates at 600 lbs. pressure, where it formerly operated at 200. It is equipped with a Detroit stoker, Stock Engineering coal scales, Western Precipitation fly ash collector, Vulcan soot-blower and Clarage fans. One new turbo-generator is rated at 6,000 kw, 600 psi steam inlet, 50 psi back pressure, extraction at 200 psi. The other is rated at 7500 kw, 600 psi inlet, operating on a condensing cycle, extraction at 50 psi. Bailey Meter controls are used with the new turbines and changes were made in the water intake system.

**CONVERTING KEEPS PACE . . .** In the past year, a new Kidder 2-color aniline, 1-color gravure press started up, higher speed than an older one still in use. A new polyethylene machine is on order.

The wax department has a new 72 in. squeeze roll wax coater primarily for glassine from No. 11. The main coating section is by Dilts division of Black-Clawson and drive is Reliance. New equipment with it enables blending of waxes.

Impressive newcomer in finishing is a 72 in. hydraulic Seybold trimmer with automatic spacing equipment. It has stepped-up production.

To keep up with a demand for more printed bags, two Thilmany-designed printing presses brought total number to 19 in that department. In 5 years bag printing has increased from 30% of output to about 70%.

**HOW EXPANSION IS DECIDED . . .** So it goes at Thilmany. Each department head must show anticipated savings or increase in production and quality to justify new equipment, and these requests are passed upon by a committee headed by Charles R. Seaborne, executive vice president; Art M. Schmalz, production manager; Paul West, pulp mill supt.; Frank Kreiling, paper mill supt.; Steve Baisch, design engineer in charge of engineering, and R. E. Driessen, converting supt.

## Thilmany Has A "Community Goal"

Thilmany management has what it calls a "community goal" and this is a working partnership with the city of Kaukauna, which is two years younger, as a municipality, than the mill itself. The loyalty to this town has been demonstrated many times by the company, which operates here at an admitted higher cost than it would in other parts of the country. These facts are frankly told to the community, and the company has made it clear it is in Kaukauna "for keeps."

A waste reduction campaign has been a major activity at Thilmany

over many months. This has shown definite, worth-while results, and how it operates was described fully in a previous article in PULP & PAPER. With costs increasing, it has been highly beneficial. More than that—it insures this industry for Kaukauna.

An example of Thilmany-Kaukauna partnership is joint development of water power, bringing the city the lowest electric rates in the state.

You may know Kaukauna for its justly famous cheese. But the city of Kaukauna knows and appreciates its real stake in its one great industry—Thilmany Pulp & Paper Co.—and it is determined to keep the industry in Kaukauna.







**LEADERS OF THILMANY.** (L to r) KARL E. STANSBURY, Chairman of the Board; ELMER H. JENNINGS, President; CHARLES R. SEABORNE, Executivce Vice President.

## A Mill IS the People Who Run It

The character of a mill reflects the people who are its leaders and supervisors, and so it is at Thilmany:

**KARL E. STANSBURY,** chairman of the board—Started career as a newspaper reporter. Went to work for Thilmany as clerk and general utility man in 1906. Seven years later became secretary and sales manager. Then vice president, and president, 1936-1950. Since then, he has been chairman.

**ELMER H. "JENKS" JENNINGS.** president—Started as assistant to Mr. Stansbury in 1916. Was elected a director and assistant secretary in 1928. In late '20s, became engaged in full time sales work and by 1936 was named vice president and sales manager. President since 1950. Since the time he first entered sales, the volume has increased seven times.

**CHARLES R. SEABORNE,** executive vice president—Joined Thilmany as assistant engineer in 1918. Distinguished in industry as builder of mills and inventor of processes and developer of many operating improvements. Designed and rebuilt No. 2 mill at Thilmany, doubling company's capacity. In 1920 built Paper Converting Co., joint venture of Thilmany and Kimberly-Clark, and was mill manager until 1924 when Thilmany sold its interest. As chief engineer of Thilmany, he built Longview Fibre Co. mill, Longview, Wash., staffed with Thilmany-trained key men (1926-7). Returned to Kaukauna, became director, vice president and treasurer in 1940. Has been executive v.p. since 1950.

**GUY E. MC CORISON,** vice president in charge of sales—After a number of years in other capacities, he stepped into top sales position in 1950, taking over from Mr. Jennings. Known throughout industry for outstanding sales development in specialties field.

**E. R. "TED" SUTHERLAND,** secretary-treasurer and general purchasing agent—Joined company in 1940 as office manager, after several years as chief accountant of large Milwaukee industry. Graduate of Wisconsin, studied law and accounting. By 1943 he became assistant treasurer. Two years later, secretary-treasurer. In 1946, was made a director. In addition to other responsibilities, he oversees all purchasing, with **DOROTHY DE JONGE** and **STANSBURY YOUNG** as his two assistants.

**ARTHUR M. SCHMALZ,** general production manager—51-year veteran of Thilmany, with a career made colorful by his own personality. He started by scraping groundwood screens. Was also part-time chauffeur for **M. A. WERTHEIMER,** then Thilmany president (and father of Robert S. Wertheimer, vice pres. and res. mgr. of Longview Fibre Co.). The Wertheimer group had bought the mill from **OSCAR THILMANY,** its founder. Mr. Schmalz has worked everywhere in the mill and for affiliated companies and traveled far and wide for Thilmany. During an interlude of his wandering, he served in the army at Vancouver Barracks, Wash. He is one of four Schmalz brothers, **ART, ORRIE, RAY** and **LOYAL,** all Thilmany employes.

**FRANK X. KREILING,** paper mill supt.—Born in Chippewa Falls, Wis. Graduate of Lawrence College, 1932, then took additional year of chemistry.



**PURCHASING AT THILMANY . . .** E. R. (TED) SUTHERLAND (left), Secretary and Treasurer of Thilmany, is also its Purchasing Director. Here he is with his assistants, STAN YOUNG and DOROTHY DE JONGE.









**MORE THILMANY TOP PERSONNEL . . .** (l to r) PAUL H. WEST is Pulp Mill Supt., R. E. DRIESSEN is Converting Supt., WAYNE CARR is in charge of Maintenance and Construction, C. L. DOSTAL is Assistant to Exec. Vice President.

Employed at Institute of Paper Chemistry three years in pulping and optics laboratories. At Thilmany since 1947, two years in laboratory, five as assistant to paper mill supt., 12 years as supt.

**PAUL H. WEST,** pulp mill supt.—Graduated from University of Wisconsin in civil engineering in 1935. After two years with State Highway Commission, joined Thilmany in 1947 as pulp mill control engineer. Became supt. in 1940 and has headed pulp mill, recovery and woodroom expansion since 1950. Is past chairman of Northwestern Supts. Division.

**M. L. DOWNS,** technical director—Graduated in chemical engineering from Penn State in 1931; ph.d. from Institute of Paper Chemistry in 1934. Development chemist with The Mead Corp. from 1834-37. With Thilmany since then, first as chief chemist, now as technical director.

**STEVE BAISCH,** design engineer in charge of engineering—Born in Ironwood, Mich. Graduated from University of Wisconsin, 1942, served 3½ years in WW II in army ordnance, in North Africa and Sicily, finally with rank of major. Has been at Thilmany since 1945. Recently chairman of TAPPI corrosion committee. Is chairman of Lake States TAPPI section.

**WAYNE CARR,** in charge of maintenance and construction—Born in Dundee, Ill. Received b.s. in civil engineeering from Purdue University. Joined Thilmany in 1942.

Other key men at Thilmany include **C. L. DOSTAL,** assistant to executive vice pres.; **R. E. DRIESSEN,** converting supt.; **CHARLES R. SEABORNE, JR.,** in charge of power plant engineering; **KEN KIFFE,** in charge of wood procurement; **AL KLAMMER,** supt. of asphalt dept., and a 40-year veteran with Thilmany; **NORMAN ZANZIG,** advertising and public relations mgr.; and **L. C. SMITH,** industrial relations director.



**PERSONNEL AT THILMANY . . .** MARTIN L. DOWNS (left), is Technical Director. NORMAN ZANZIG (right), a busy man at the telephone, is Advertising Manager, with many related duties involving community relations, etc.

# Thilmany "Grads" Spread "Know-how"

Thilmany is not only famous for its products—but also for its "alumni."

A mill which is 73 years old and was, in early days, one of the few mills in the kraft field, would be expected to nurture young men who would find their life work in other similar new enterprises springing up all over the continent. At the same time, Thilmany men who stayed at home have long service terms—up to 40 and 50 years.

Those who put their Thilmany training to use elsewhere, always speak with fond nostalgia of their Kaukauna days. Among them are:

Robert S. Wertheimer, former assistant engineer at Thilmany, now vice president and resident manager of Longview Fibre Co. His father was president of Thilmany.

Erling Riis, now vice president and general manager of all International Paper Co. operations in the South.

J. J. Herb, who started as a clean-up man at Thilmany, now is chairman of the board of Pacific Coast Paper Mills and Westminster Paper Co., mills he founded in Far West.

Peter J. Onkels, mill manager, Pacific Coast Paper Mills of Washington, Inc.

R. M. ("Dick") Radsch, vice president and sales manager, Appleton Machine Co.

Walter Johnson, manager, Pollock Paper Co., Columbus, O., and former manager, Brown Co., Cascade Mill.

Lester J. Smith, gen. supt., St. Regis Northern N. Y. mills, and mill manager, Harrisville Paper Co.

Charles A. Grondona, manager of mfg., Hollingsworth & Whitney Div., Northern mills, Scott Paper Co.

Joe Houlihan, general supt., Port Huron Sulphite & Paper Co.

E. C. ("Casey") Nelson, chief engineer, Gilbert Paper Co.

Elmer M. Leavitt, general supt., North Carolina Pulp Co.

J. A. Staidl, pulp mill supt., Camp Mfg. Co.

Herman Gevers, consultant for St. Regis Paper Co.

William Gillen, formerly supt., Fox Paper Corp.

Dale Starke and William Heintz, both of the Kimberly-Clark organization.

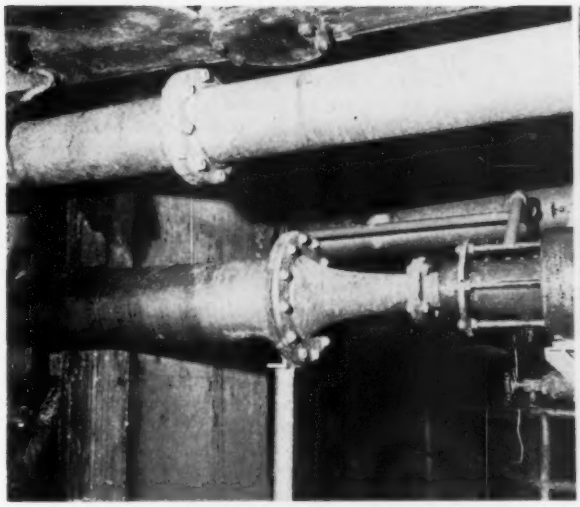
**14 AT LONGVIEW FIBRE . . .** Besides M. Wertheimer, others at Longview Fibre Co. include: L. C. Peabody, secretary-treasurer; Carl Fahlstrom, asst. resident manager; Henry Dauterman, assistant paper mill supt.; J. W. Schuh, assistant chief engineer; W. W. Wenzel, assistant pulp mill supt.; Steve Siebers, tour boss; E. S. Ashe, asst. personnel mgr., W. Van Dinter, groundwood foremen; M. Diedrick, asphalt and waxing foremen; H. Weyenberg, laminator operator; C. O. Wenzel, assistant mechanical foreman; Charles Ruppert, lead millwright, and Claude Miller, machinist.

Tony Siebers, of Longview, former paper mill supt., is doing occasional consulting work. H. F. Hoehne and Earl Miller are retired. Tony Gillen moved to Gresham, Ore. Jule LaPoint is in Longview in other work. Ed Umland, Henry Spill and Roman Gillen, who also went from Thilmany to the Longview mill, are deceased.

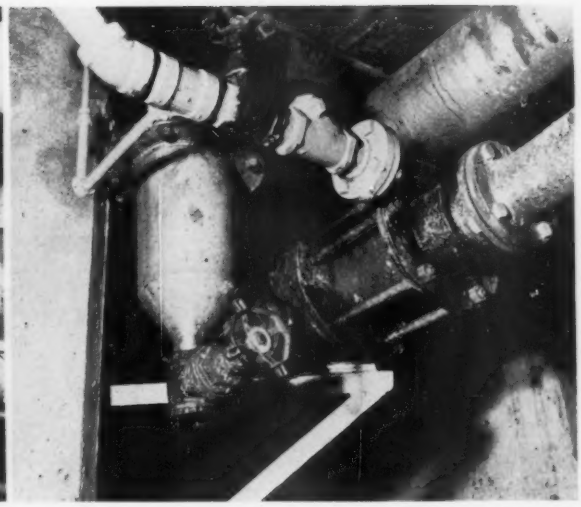
The late Henry Adrians was supt. at Consolidated Water Power & Paper Co.'s Stevens Point, Wis., mill. P. J. Bradley was supt., and Alex Wodjenski and Bill Wodjenski, machine operators, at B-F-D Div., Diamond Match, Plattsburg, N. Y. George Rausch was supt. at Marathon Paper Mills of Canada. D. B. Uricker went with American Viscose Co.



**A HUDDLE AT THILMANY . . .** (L to r) FRANK X. KREILING, Paper Mill Supt.; ARTHUR M. SCHMALZ, Production Mgr. (now in his 52nd year with the firm and going strong), and STEVE BAISCH, Design Engineer in charge of Engineering.



**HOW HEADROOM PROBLEM WAS SOLVED . . .** Continental solved limited headroom problem by installing a horizontal Vorject which performs as well as its vertical-sister unit.



**WHERE REJECTS GO . . .** Elutriation chamber (right) in which rejected material is discharged into center of slow moving vortex of water through which oversize and heavy materials fall. At left, stainless steel screen trap. Interior has ⅝-in. series of holes to catch large reject particles which would clog ½-in. orifice. Trap is dumped manually once or twice a shift.

# At Jersey Mill—No Speck Problem Anymore

• Metal specks in waste paper stock are not the problem they once were at Continental Paper Co., although this mill at Ridgefield Park, N.J. produces more than 320 tons of cylinder board daily, largely from waste paper stock.

As any mill man will tell you, metal specks can raise havoc—the degree of havoc depending on your end product. Continental has one customer who has to be severely critical because he converts their product for packaging industrial wipers. He insists that no metal specks be in the product—for obvious reasons.

The first equipment used to combat the problem was a Nichols Freeman Vortrap. Its principle is multiplication of gravity effect by centrifugal force. The Vortrap is a long, cylindrical pipe within which a liquid suspension entering the top through a tapered, tangential inlet is swirled under pressure. Stock flows downward at high velocity along a helical path until it reaches the bottom, where it reverses itself to return along the central axis to the outlet at the top of the cylinder above the tangential inlet.

A 6-in. Vortrap was installed on the bottom liner of No. 1 machine, a Beloit trimming 122-in. Speck tests on identical furnish before and after installation brought about an 80% reduction, said Maurice Strelitz, chief engineer.

Continental makes its speck test by taking fifty 2 sq. ft. samples off the dry end and going over them with a magnifying glass, a dental pick and a magnet. Actual speck count after Vortrap installation was approximately 12, against about 60 before installation.

**NEW VORJECT IS TRIED . . .** About this time, Nichols developed the Vorject Cleaner, a higher efficiency unit where power requirements are justified by the need for greater foreign particle removal.

In June 1955, the first Vorject installation on a cylinder machine was made on the bottom liner of No. 2, a Beloit 8-cylinder trimming 132-in. Speck tests were made and the count was reduced to 4.

Continental decided to install a second Vorject on its No. 8 screen for No. 2 machine. However, headroom was severely limited, so Mr. Strelitz suggested to Al Dyson, Nichols pulp and paper division manager, that he would like to test possibilities of installing



**320 TONS PER DAY . . .** This is Continental Paper Co. at Ridgefield Park, N. J. where some 320 tons daily of cylinder board are produced.



**WORKED ON SPECKS PROBLEM HERE . . .** New office building at Continental also houses Engineering Department.



**MAURICE (MAURY) STRELITZ,** Chief Engineer, Continental Paper Co.

this unit in a horizontal position. This unit has been satisfactory, according to Mr. Strelitz, and in addition some $500 was saved in piping cost.

The Vorject principle is similar to that of the Vortrap, with added emphasis on extremely high efficiency stock cleaning. The Vorject cleaner comprises a headpiece, cylinder, curved cone and coretrap or elutriation chamber rejects assembly.

Main function of the headpiece is to convert a high percentage of the pressure energy, produced by the pump, to velocity energy used for separation of dirt and foreign material by centrifugal force. Separation in the stainless steel cylinder is effected by this centrifugal force so that by the time the swirling stream reaches the lower end of the cylinder, all oversize material is forced against the wall. A liquid layer moving slowly along the wall receives the separated material. Finish of this cylinder is such that this layer is undisturbed, consequently the foreign material is not returned to the inner stream of clean (accepted) stock.

Important feature is a curved cone design, which acts to turn back cleaned liquid to the inner portion of the vortex and to allow separated material to slide over it. The cone is so curved that large foreign particles find no support on the cylinder wall, but are forced out at the bottom.



**THE FIRST UNIT . . .** Vorject Cleaner installed on a cylinder machine. Speck count was reduced after installation by 92%.

**HOW CONTINENTAL USES UNITS** . . . Due to the large size reject particles in the system at Continental, it was necessary to install a screen trap. This is a stainless steel vessel inside which is a trap with a series of ½-in. holes. Large reject particles which would clog the ½-in. discharge orifices are caught by this trap, which is manually dumped once or twice a shift.

The Vortrap at Continental is supplied by an Ingersoll Rand pump with a 15 hp General Electric motor and operates at inlet pressure of 23 psi, with stock consistency varying from 0.4% to 0.9%. Outlet pressure varies from 4 psi to 6 psi. Accessory valves are by Record.

The No. 610 Vorject units at Continental operate at inlet pressures between 50 psi and 55 psi with stock consistency from 0.2% to 0.7% and outlet pressure between 1 psi and 2 psi. Units are supplied by a Lawrence pump with a 30 hp General Electric motor.

Mr. Strelitz stresses this point to engineers: Where there is any quantity of metal and where stock consistency is low, special precautions must be taken in the selection of abrasion-resistant equipment.





**This Gilbert and Nash Model 434** guide is geared for today's high-speed production requirements. A sealed planetary reduction gear and anti-friction bearings *assure* trouble-free operation at machine speeds *up to 3000 f.p.m.!*

This low-contour guide is recommended for wire, wet felt and dryer felt service.

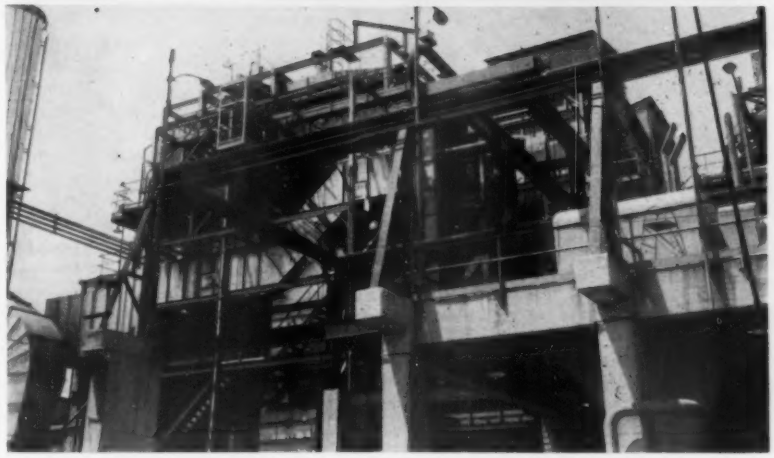
And like all Gilbert and Nash guides . . . Model 434 is *engineered for the job!*

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**BURNS GAS AND BARK.** Riley Stoker Co. combination natural gas-bark burning boiler at Bogalusa. At right is glimpse of new turbo-generator.



**TREND IN TURBINES.** Gaylord mill's new 15,000 kw General Electric outdoor type turbo-generator is typical of trend in Southern pulp and paper industry to large-size generators.

# New Power Plant Serves Bogalusa

## Crown Zellerbach's heritage in its new Louisiana division will stand it good stead for future Southern expansion.

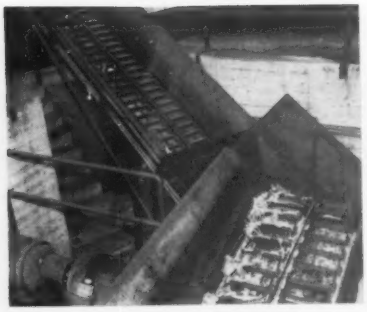
● One of the important steps taken by Crown Zellerbach Corp. in planning the future of its new Gaylord division, formerly Gaylord Container Corp., has been the creation of "teams" from both companies to carry on various studies in all the Gaylord operations and activities. Plans for expansion are a major objective of these studies.

A PULP & PAPER visit to the big Gaylord mill at Bogalusa, La., shortly before the merger got under way, revealed that one of the major assets which Crown Z acquired in its new Pelican State properties is a newly improved power supply, well above average for Southern mills. This was part and parcel of a $9,000,000 modernization carried out by Gaylord just prior to the merger.

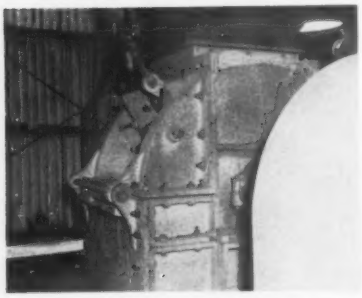
The former Gaylord management, and now the Crown-Gaylord management, Was, and is, keen to effect whatever changes are necessary to retain this Southern division's high standing in both mill and forest. The Gaylord heritage—and now Crown's—is the old Bogalusa Paper Co., an industry pioneer plant of 1918, and before that the predecessor company, Great Southern Lumber Co., which established the first commercial pine forest in the Southland.

**GAYLORD HAS BEEN A PIONEER**—Long ago, PULP & PAPER reported the establishment at Gaylord of a flexible arrangement with small-sized digesters for individual cookings of woods other than pine. This is the modern trend, preparation of hardwood pulp separately and then blending with pine pulp for specific usage. Pioneer in pine plantations, Gaylord has also been alive to silvicultural need for usage of hardwoods for the mill company that owns land in the South.

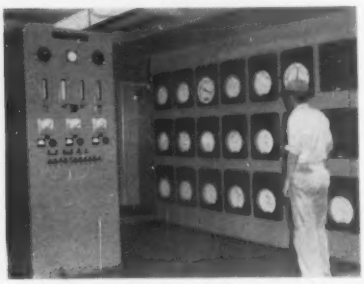
In PULP & PAPER, June 1952, issue we told about the new pulpwood handling installation at Gaylord's mill yard and including the Corley small-sized sawmill installed to reduce old field and "hog" pine trees of no lumber value to chipper size.



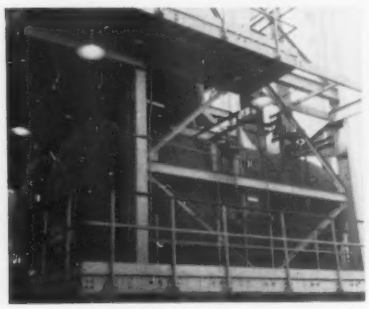
**CHANGES DIRECTION.** Link-Belt Co. bark conveyor changes direction in progress from barkers to screening and hogging for boiler feed.



**BARK IS HOGGED HERE.** This Diamond knife hog, 200 hp motor driven, reduces rejected bark from 2-in. Link-Belt vibrating screen at Gaylord.



**AUTOMATION PHASES.** At left is G-E control panel for hydrogen gas used to cool new 15,000 kw generator; at right, Bailey Meter control system board for new boiler.



**DEAERATES CONDENSATE.** Condensate from paper machines (and any other source) passes through this Cochrane deaerator at 600,000 gpm at 35 lbs. pressure.

Another step in mill improvement reported by PULP & PAPER (July 1954) covered the new screening-washing installation.

**NEW OUTSIDE-TYPE TURBINE**—Principal feature of a new power unit erected alongside the existing house is an outside type 15,000 kw General Electric Co. turbo-generator. The turbine accepts steam at 850 psig and 825° F., exhausts at 150 lbs., has 14 stages, and operates at 3600 rpm. The generator is hydrogen cooled with gas pressure at 0.5 psig-30 psig. Ratings are 18750 kva-22969 kva; 15,000 kw-18375 kw; 3 phase Y-connected for 13,800 volts.

**TWO BOILERS AUGMENT FACILITIES**—Steam for this turbo-generator comes from a 350 tons (1,050,000 lbs. solids) Combustion Engineering recovery boiler producing 142,000 pph of steam at 875 lbs. and 830½ F and from a Riley Stoker Corp. combination natural gas-bark burning boiler. The latter went into operation in June 1954, and the recovery boiler met design conditions in Sept. 1954.

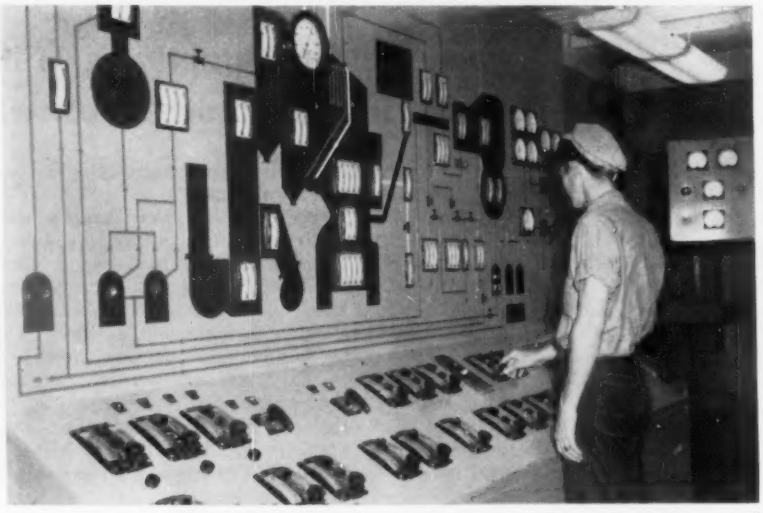
Combination burning of gas and bark is effected by setting Bailey Meter Co. automatic controls for gas feeding at the nominal rating output of 250,000 pph. As bark is fed into the furnace the combustion control operating off of header pressure diminishes or increases the volume of natural gas to maintain the set rate. Nominal boiler rating is 250,000 pph with production of 300,000 pph for one hour, and burning of 60,000 pph of bark but capable of 90,000 pph for one hour. In practice the boiler has performed well above nominal rating for a matter of hours.

Working pressure design is for 1050 psig. Super-heat is controlled by means of a submerged exchanger in the lower drum. The new boiler's pressure-temperature are well above the 450 lbs./700° F of the older installation. The new unit is entirely outside and is completely separated from the old plant, except of course, electrically.

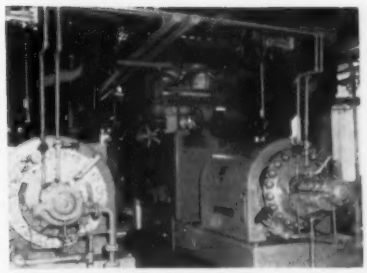
**HOW BARK IS HOGGED**—Bark from the drums is carried by Link-Belt refuse type conveyor to an elevation for discharge to a 2-in. opening Link-Belt vibrating screen. Acceptance is from 40% to 50%. Over-size rejects move down under an electro magnet which removes tramp iron and into a 200 hp driven Diamond knife hog. Both screen-accepted and hog product bark are discharged to a 30-in. conveyor belt serving a small surge function bin above boiler elevation. When hog knives are being changed, a hinged upper section of the screen chute is turned up to deflect all bark direct to the belt.

Screw conveyors pass the bark to 6 chutes feeding pneumatic spreaders from which it is directed upward and outward into the furnace. Fines of the material are burned in suspension with ultimate consumption of heavier particles on the traveling grate. Residue is carried to the boiler hoppers and dust collectors, and operation technique has been perfected through experience to effect satisfactory reinjection of partially consumed portions. Modification of ash conveyance is now being effected to completely solve this operation.

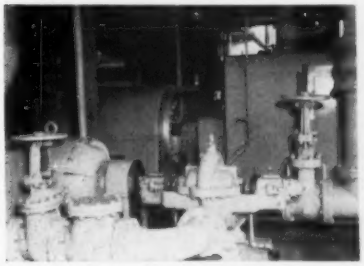
Bark is fed into a furnace having a 43-ft. vertical clearance height, 22-ft. width and 18 ft. depth—16,725 cu. ft. volume. Total heating surface, including water walls and superheater is



**OPERATION CONTROLLED HERE.** Bailey Meter Co. panel-console graphic control board for new Gaylord **power plant.** Operators attended classes for three weeks for schooling.



**SERVES BOILER.** Feed water is forced into boiler by these two DeLaval Steam Co. turbines, each with 1000 gpm capacity at 1150 lbs. pressure.



**SERVES FEED PUMP.** Make-up feed water from condensate reserve tank is pumped by Warren centrifugal unit, serving DeLaval high pressure feed pump in rear.

33,688 sq. ft. Soot blowers are installed in the economizer and one Diamond IK unit on each side of furnace. Provisions have been made in furnace walls for future units if desired.

**AIR AND WATER FOR BOILER**—Air for the boiler includes a 250 hp direct driven forced draft fan, a 700 hp direct driven induced draft fan, a high pressure fan for over-fire and cinder reinjection, and a small blower for pneumatic bark distributors. Dampers for boiler inlet air and outlet cases are automatically controlled.

Water for the gas-bark boiler is made up entirely of condensate from the paper machines and other sources whereas the creek with intermediate pond and condensate from evaporators serves the older plant. When machines slow down or are off, make-up water from a storage tank is furnished with a Warren Steam Pump Co. unit. The boiler is served by two 1000 gpm (each) DeLaval Steam Turbine Co. units with 1150 lb. discharge pressure at 3550 rpm, 45 lb. suction pressure, and 280° F temperature, both driven by DeLaval pressure-speed governed steam turbines.

Condensate is first passed through a Cochrane deaerator of 600,000 gpm capacity at 35 lbs. pressure.

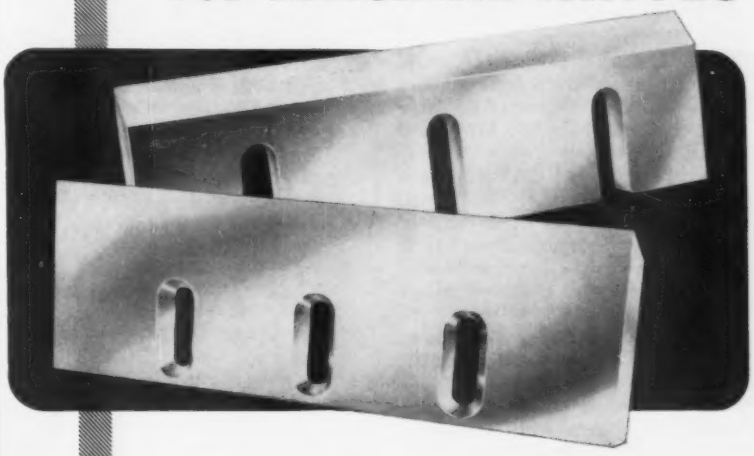


**IN CHARGE OF POWER.** They run both old and new power plants: (left) H. O. MARQUART, Asst. Power Supt., (right) R. J. CRUTHIRDS, Power Supt.

**COMPLETE CONTROL**—This is provided from a commodious room containing Westinghouse cubicle switch control for the generator, General Electric instrument control for the hydrogen gas, Bailey Meter boiler control system board, and graphic combination console and panel by Bailey. Operators have the entire installation before their eyes and at finger tips. Prior to start up, the crews were schooled in classes over a 3-week period, resulting in smooth personnel functioning in initial stages.

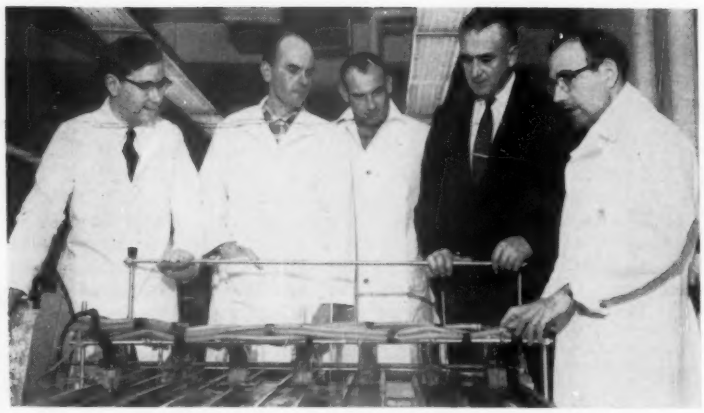

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**SEEK NEW FACTS USEFUL TO ENTIRE PULP INDUSTRY.** Joint industry-state team works on problems of Sphaerotilus growth in Columbia River at CZ's Central Research Laboratory (left to right): DR. FRED CORMACK, CZ Assistant to Project Leader; DON PETERSON, Washington Pollution Control Commission Survey Supervisor; RICHARD WAGNER, Aquatic Chemist for the state; DR. W. W. MOYER, CZ Director of Research; and DR. HERMAN AMBERG, Project Leader. The team is inspecting experimental troughs used to determine factors affecting slime growth.

# State Joins C-Z in Joint Stream Study

● New basic information applicable to the entire chemical pulp industry may result from a cooperative State of Washington-Crown Zellerbach Corp. study to determine "how" and "why" slime bacteria grows in streams.

It will be conducted as another function of the CZ Central Research Dept. headed by Dr. W. W. Moyer at Camas, Wash.

In cooperation with the Washington State Pollution Control Commission, it aims at solving the slime problem in the lower Columbia River. It is believed the most comprehensive program of its kind ever undertaken in this industry.

Dr. E. J. Ordal, Univ. of Washington microbiologist, is coordinating director for the state.

Under direction of the state commission, the program will be cooperatively carried out at Camas by scientists and engineers from both the Commission and CZ. CZ will pay entire costs, estimated at $150,000.

The Commission believes effluents from Camas mill, along with wastes and sewage from other sources, contribute nutrients which support slime growth. Pres. J. D. Zellerbach said his company was prepared to meet its responsibilities and proposed that the Commission retain an outstanding biologist of its choosing to conduct studies.

CZ's stream improvement team is headed by Dr. Herman R. Amberg, for the past four years West Coast research engineer, National Council for Stream Improvement, Corvallis, Ore., and also associate professor, Oregon State College Engineering Experiment Station. Dr. J. F. Cormack, CZ biochemist, is Dr. Amberg's assistant. Don Peterson and Richard Wagner are others assigned by the state.

Sphaerotilus, a long filamentous slime growing in the river, breaks off in large masses and collects in commercial fishing nets. This resulted in protests by commercial fishermen.

Toxicity and BOD are not presently a problem here.

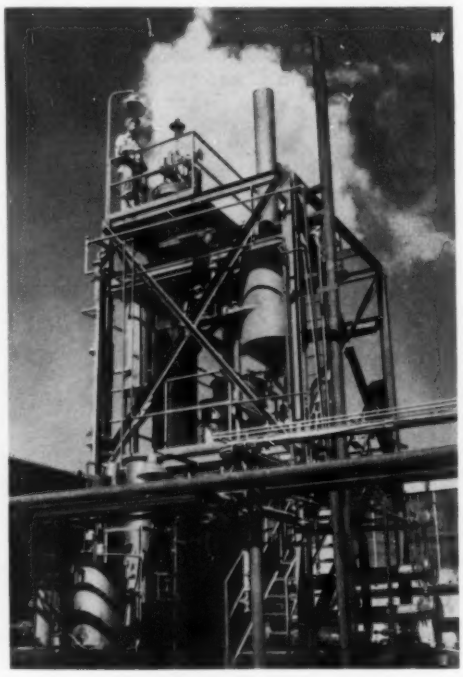
First phase of the project is to make cross section analyses of the entire river from above Camas down nearly to Vancouver, Wash. Immediate objective is to determine nutritional factors essential to Sphaerotilus growth other than sugars and to find out the extent to which sulfite effluent, municipal sewage, etc., contribute.

CZ is concurrently investigating feasibility of extending recovery of commercial chemicals from sulfite pulping. It already produces two, Greenz 26, an iron-zinc complex for application to orchard trees, and Orzan, a slurry dispersant, mulsifying agent, etc.

## Here's How Crown Z Recovers New Product

Crown Zellerbach Corp., which views the manufacture of chemicals from waste materials as a logical production complement for the pulp industry, recently undertook the production of dimethyl sulfide from kraft black liquor with start-up of a pilot plant at Camas, Wash. This operation, with potential capacity of 2 million lbs. annually, uses a patented Swedish process (issued to Erik Hagglund and Terje Enkvist and assigned to Swedish Cellulose Laboratory) for which CZ holds exclusive U.S. and Canadian licenses.

The pilot plant at the Camas Division mill is expected to produce dimethyl sulfide at lower prices than previously achieved. Based on Crown's present kraft production capacities, the process has a potential dimethyl sulfide output of 75 million



**CROWN Z ADDS MORE RECOVERY PRODUCTS.** Pilot plant at Camas Div. mill has potential for producing two million pounds dimethyl sulfide per year from kraft black liquor.

lbs. per year at the present 75-lb. per ton of pulp.

The dimethyl sulfide plant uses kraft black liquor from evaporators to which sodium sulfide is added and the slurry held at controlled heat and pressure a short time. Then the dimethyl sulfide, along with some methyl mercaptan and heat values, is recovered by flashing and condensing. The stripped liquor returns to the regular liquor recovery cycle.

This additional recovery process has only the effect on the conventional recovery cycle of reducing slightly the amount of heat recovered in the furnace due to losses of organic matter.

**"EXCITING PROSPECTS"** . . . Dimethyl sulfide has "exciting prospects." Its big potentials concern uses as an "intermediate"—a material used as a process step to get something else, a field of likely possibilities. Big market uses are expected for dimethyl sulfide. Crown initially priced its output at 15c per lb. f.o.b. mill in carload lots and anticipates bringing the price even lower as the uses and production expand. Major markets, as Crown foresees them, include uses as carrier for sulphur in both rubber and agricultural chemical fields, counter-odorant and masking agents, as an intermediate, and as a base for solvents.





**Top Executives at Potlatch**

ROBERT E. BUNDY (left), newly appointed Executive Vice President of Potlatch, who has had long career in pulp and paperboard manufacturing.
E. C. RETTIG (right), who previously had been named an Executive Vice President at Potlatch. He has been with the forest industries company many years.

The pilot plant operation comes under the direction of CZ's new Chemical Products Division headed by Dr. W. M. Hearon, formerly assistant director of research.

## Bundy Joins Potlatch Forests Inc.; It Acquires Deer Park Pine Industry

● Robert E. Bundy, until recently executive vice president of Fibreboard Products Inc., has joined Potlatch Forests Inc. as executive vice president. He has had many years experience in the paperboard field, rising up through the ranks in Fibreboard and holding many key positions. He left the company after its recent absorption into Pabco Products Inc., San Francisco.

Mr. Bundy takes up his new duties at Lewiston, Ida., Sept. 1. He was graduated from the University of Washington, at Seattle, in the late twenties in forestry, and Seattle was his early home. He worked up in the Fibreboard organization in the Northwest and became manager of the mill at Port Angeles, Wash., which makes sulfite pulp, groundwood and board. He went east for a few years to manage the subsidiary Eastern Division plants in Philadelphia and Baltimore. Then he was called to Fibreboard's San Francisco headquarters to move up in direction of all production and operations. He has had a prominent role in the annual joint labor negotiations of Pacific Coast mills.

Shortly before Mr. Bundy joined Potlatch, E. C. Rettig, a veteran executive of that company who came up in its logging, lumber and plywood manufacturing organization, also was made an executive vice president. He had been with Potlatch ever since his graduation from the University of Idaho in forestry. He was a former president of the Pacific Logging Congress.

These two men will be top executives of the company under President William P. Davis.

**POTLATCH-DEER PARK MERGER** . . . Other important news affecting Potlatch was its acquisition of the Deer Park Pine Industry Inc., which Chairman Walter M. Leuthold of Deer Park called one of the biggest deals ever effected in the Inland Empire forest industries (Eastern Wash. and Ore., Idaho and Western Mont.). Final action was subject to approval of PFI stockholders.

Deer Park produces about 45,000,000 bd. ft. of lumber a year at Deer Park, Wash., near Spokane, and has 100,000 acres of timberlands in three northeastern Washington counties. It has a large fleet of logging trucks and other equipment. It distributes products throughout the United States.

Mr. Leuthold's son, J. H. Leuthold, of Spokane, is president of the Deer Park firm. The Chicago & Riverdale Lumber Co. of Chicago owned 40% of the company and 60% was owned by the Leuthold family.

The Canadian holdings of the Leuthold family in Kootenay Forest Products Ltd. and its big mill at Nelson, B.C., were not affected by the merger with Potlatch. It will be recalled in past years the Leutholds had been studying possibility of building a pulp mill at or near Nelson.

### To National Defense Group

Secretary of Commerce Sinclair Weeks has designated 83 executive employes of private industry as members of the National Defense Executive Reserve. To date, several paper executives have accepted this invitation: John D. Davis, The Mead Corp.; Robert D. James, American Box Board Co.; Richard A. McDonald, East Texas Pulp & Paper Co.; Leonard E. Pasek, Kimberly-Clark Corp.; Norval M. Postweiler, Riegel Paper Corp.; and Joel B. Ware, Great Northern Paper Co.

# How To Do It

## A Scheme for Dumping Broke Carts

As a new Shartle Hydrapulper was put into operation at the Johnsonburg, Pa. mill of the New York and Pennsylvania Co., Inc. recently, plant personnel could point with pride to two interesting features.

John Fry, New York and Penn project engineer, designed a mechanism to dump broke carts onto a Stephens-Adamson conveyor. The 6-ft. wide, 70-ft. long steel charging conveyor is patterned after a coal conveyor, and it is driven by a 3 hp Howell Electric motor with a V-belt reduction gear.

On either side of the infeed platform is a power-operated mechanical broke cart dumper. Here, broke carts are anchored in a cage and raised and tilted to discharge their contents onto the conveyor. Each dumper is separately controlled by push buttons on either side of the conveyor frame.

The complete Hydrapulper installation includes a 15,500 gal. rubber-lined dilution water tank, 20 ft. in diameter, the charging conveyor and two dumping cages. Hydrapulper operations are maintained from a Foxboro control panel.

The Hydrapulper unit has a two-fold purpose: Repulp broke, and repulp dry pulp stock from storage in emergency if either the soda or sulfite mills are not operating. Also significant is that this new unit completes New York and Penn's new stock preparation which is completely automatic. The conveyor is a duplicate of one used to feed printed paper into the Hydrapulper-cooker in the de-inking department.



(Above) JOHN FRY, Project Engineer, New York and Pennsylvania Co., Inc., designed this mechanical broke cart dumper. Demonstrating how it works is operator TRACY MINNICK, at Johnsonburg, Pa., mill. A PULP & PAPER Photo.



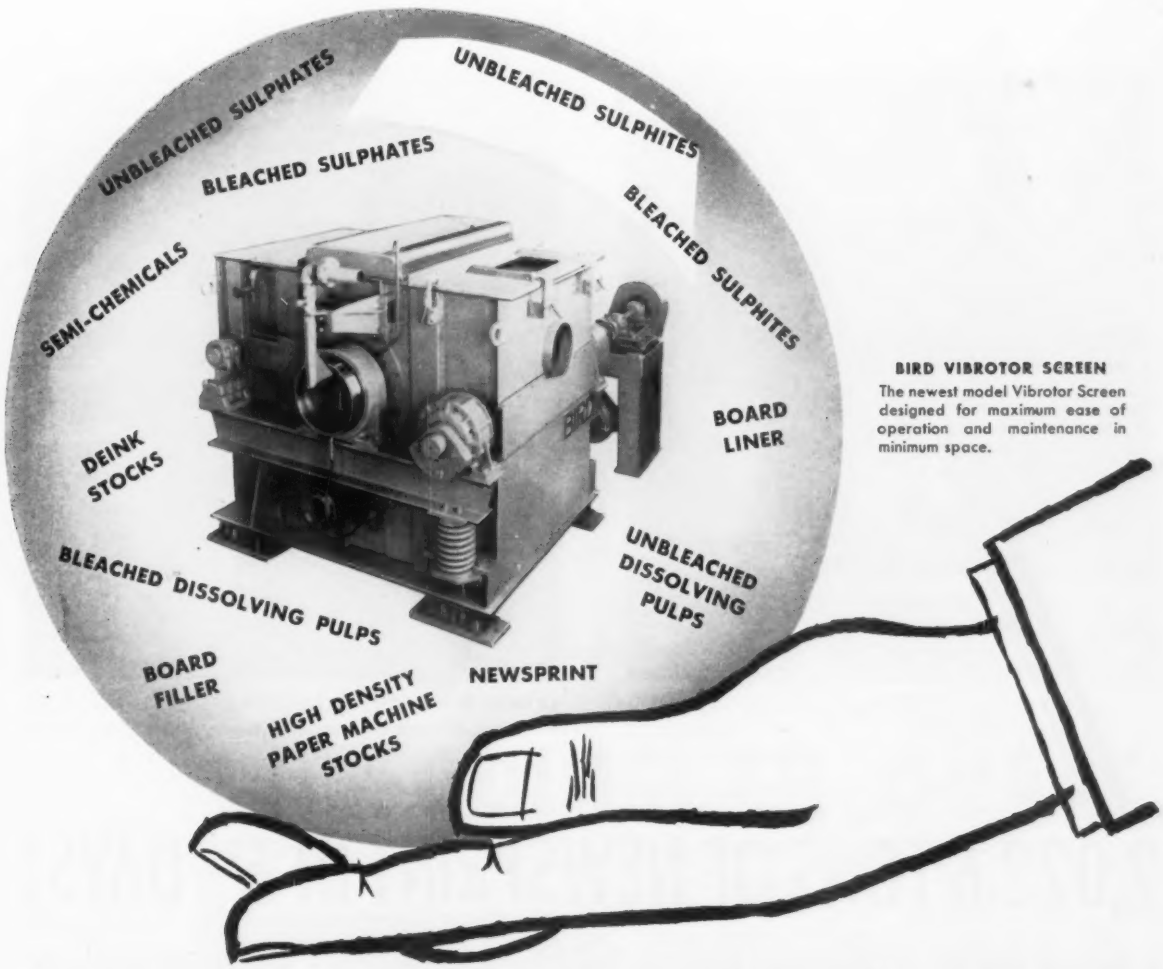
(Right) TWOFOLD PURPOSE of new Shartle Bros. Hydrapulper at Johnsonburg, Pa. mill of New York and Pennsylvania Co. Inc., is shown here. JOE SIMCHICK (in foreground) cuts up dry soda pulp stock and TRACY MINNICK (in background) empties broke from cart held in new mechanical dumper. Photo by PULP & PAPER.





## How To Cut Baling Wire Safely

Eastman Kodak Co. is one of Brown Co's. customers and buys bleached pulps for making photographic paper. Recently Kodak asked Brown for a proper method of unpacking baled pulp and here's how employes at Brown demonstrated safe methods. (Left) Operator stands safely to one side so that released wires will not spring back at him. (Right) Operator holds wire flat as he cuts so that wire will not spring up dangerously.




**BIRD VIBROTOR SCREEN**
The newest model Vibrotor Screen designed for maximum ease of operation and maintenance in minimum space.

# SEE YOUR SCREENING PROBLEMS SOLVED

The Bird Vibrotor Screen is the modern, high capacity, low cost way to screen high consistency stocks.

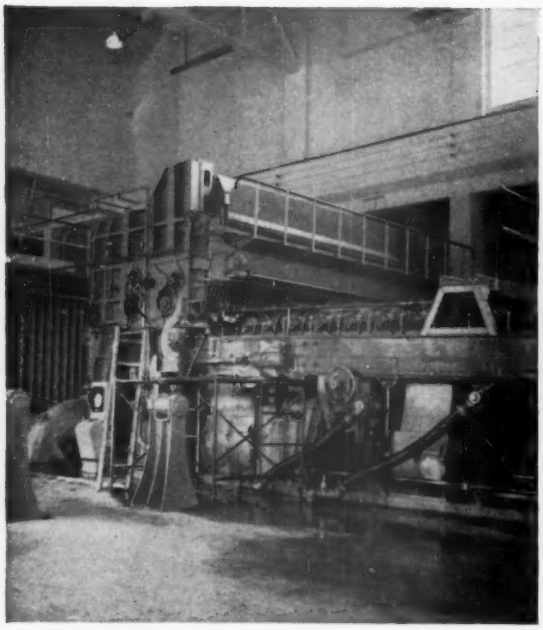
For instance, on *unbleached sulphite* of 1.5% consistency, this slotted plate screen with .012″ plates delivers 55 air dry tons per day. On 1.9% *bleached kraft* through .012″ plates — 80 tons per day. On 2.0% *board filler* through .020″ plates — 110 tons per day. On 1.9% *deink stock* through 0.12″ plates — 148 tons per day.

To see your screening problems solved, quickly and efficiently, be sure to look into the Bird Vibrotor Screen.

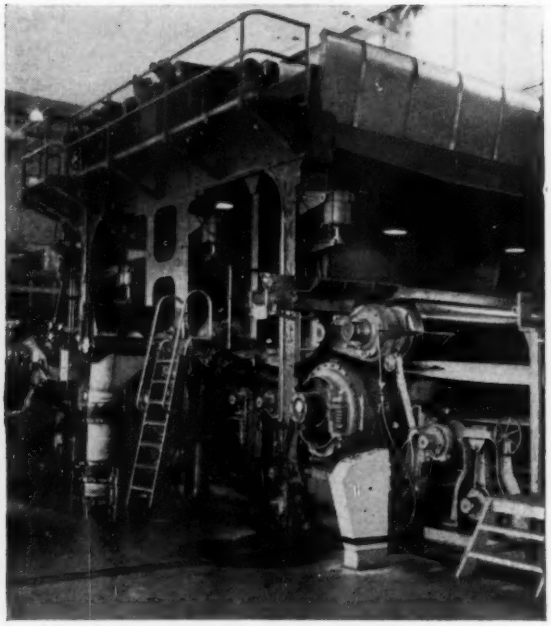
**BIRD MACHINE COMPANY**
**South Walpole, Mass.**

*Regional Offices in* Evanston, Illinois; Portland, Oregon and Atlanta, Georgia
Canadian Manufacturers of Bird Machinery
CANADIAN INGERSOLL-RAND COMPANY, Limited, Montreal

**BIRD VIBROTOR SCREEN**



DOMINION PRESSURE TYPE HEAD BOX feeds the stock efficiently ensuring good formation on the wire at any operating speed.



DOMINION COUCH VACUUM TRANSFER, another design feature contributing to the overall operating efficiency and output.

# 2,022.6 TONS OF NEWSPRINT IN 6⅔ DAYS!

## A typical run for a Dominion Vacuum Transfer equipped 284" newsprint machine.

This machine is equipped with a Dominion Pressure Type Head Box and Couch Vacuum Transfer incorporating a Screw Type Broke Conveyor-Pulper. The latter not only removes broke from the Press section but also reduces it to pulp and returns it automatically to the Couch Pit. 2,022.6 Tons of Commercial Newsprint produced in 6⅔ days is an enviable performance but one that will be surpassed as this machine and others of its type are brought to their design speeds. This is achieved through close liaison between the paper makers of Canadian Mills and the Engineers and Designers at Dominion Engineering.



DOMINION ENGINEERING
COMPANY LIMITED
PAPER DIVISION
MONTREAL TORONTO WINNIPEG VANCOUVER

## TRONA® *serves the Pulp Industry with*

# 2 QUALITY PRODUCTS

*from* 2 DEPENDABLE SOURCES



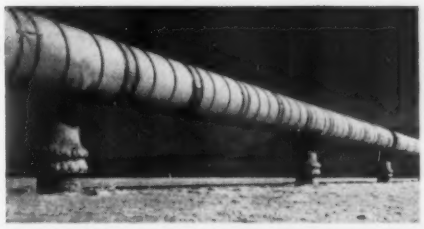
# SALT CAKE

OF HIGHEST PURITY

# SODIUM CHLORATE

FOR CHLORINE DIOXIDE BLEACH

**SEARLES LAKE at Trona, California.** Source of *natural* sodium sulphate, essential for quality kraft production



**HENDERSON, NEVADA.** Source of $NaClO_3$ for the *SOLVAY* high-stage chlorine dioxide pulp bleaching process.



Add another step forward in American Potash & Chemical Corporation's continuing diversification program! Trona has long been the leading source of *natural* sodium sulphate ($Na_2SO_4$) from the brines of Searles Lake, so essential in quality kraft production. Now from American Potash & Chemical Corporation (Nevada) (formerly Western Electrochemical Company) Trona serves the industry with highest purity sodium chlorate, used extensively in the SOLVAY high-stage chlorine dioxide pulp bleaching process. Two dependable sources, two quality products—a combination that can't be beat!

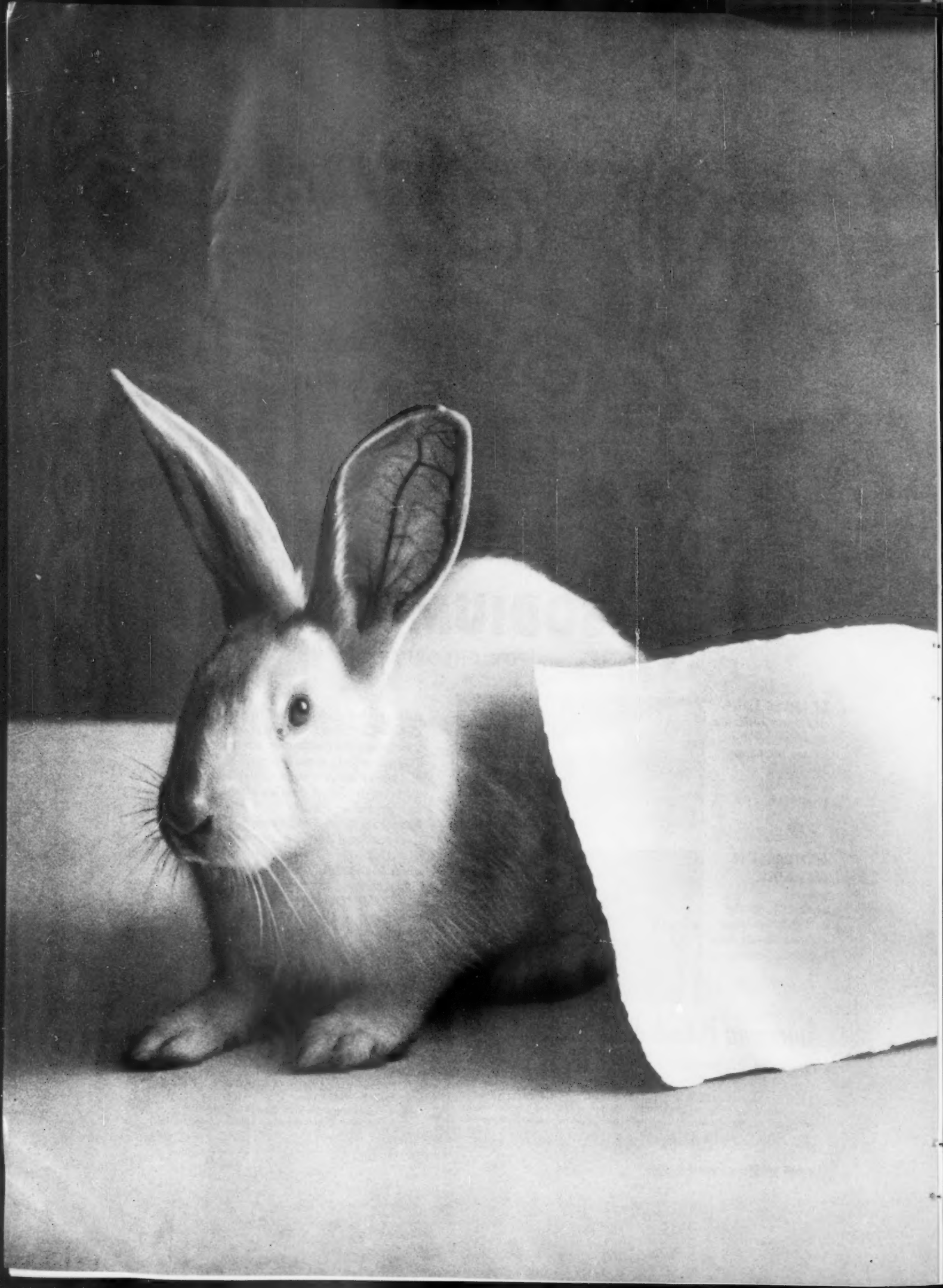
**American Potash & Chemical Corporation**

TRONA

Los Angeles New York Atlanta San Francisco Portland (Ore.)

*Producers of:* Borax • Potash • Soda Ash • Salt Cake • Lithium Bromine • Chlorates • Perchlorates • Manganese Dioxide • *and a diversified line of specialized agricultural and refrigerant chemicals*

*Plants:* TRONA and LOS ANGELES, CALIFORNIA
HENDERSON, NEVADA
(American Potash & Chemical Corporation (Nevada)
SAN ANTONIO, TEXAS (American Lithium Chemicals, Inc.)





# *The whitest white you've ever seen!*

**New mill ready ahead of schedule to bring you a dependable supply of highest-quality bleached kraft pulp.**

Rising in record time, in a specially-created town in Alberta, the Hinton mill will provide a steady supply of bleached kraft pulp of superior quality. It will be ready in January to roll out 430 tons a day.

This pulp—St. Regis *Alberta Hi-Brite*—will give you remarkable brightness, with unusual opacity, strength, forming properties and cleanliness. Its flexibility will make it suitable for use as a versatile furnish in any sheet requiring bleached pulp.

4 million acres of adjacent forest reserves assure the mill a perpetual yield of spruce and lodgepole pine. These slow-growing softwoods produce the longer, thinner fibres famous for their pulping properties.

This advanced multi-stage chlorine dioxide process, used only by St. Regis, gives *Alberta Hi-Brite* its gleaming whiteness and high brightness. The continuous digester method permits constant quality control and uniformity of output.

*For full information on how Alberta Hi-Brite can improve the quality of your product, write to St. Regis Paper Company, Dept. PP-956, 150 East 42nd St., New York 17, N. Y.*

ST. REGIS PAPER COMPANY



# This ORISKANY team is licking another tough felt problem . . .

Drainage . . . finish . . . longer felt life . . . special felt design for a particular machine operation — all these problems come up in every paper mill, and it takes experience and imagination to solve them. At Oriskany, we get a report from our field engineer regarding a specific felt application, and then a competent group like this tackles the problem. Mill superintendent, technical director, chemist, designer, sales manager — each contributes his special skill to reach a practical solution. That's the way we work at Oriskany to help paper-makers produce better paper products.

Because the facilities at our modern mill are devoted exclusively to the production of paper-maker's felts, we can concentrate our undivided attention on your particular requirements. Whether it is a need for a special chemical treatment or a question of blending with synthetics, you can be certain that your inquiry will be the signal for a 'round-the-table discussion that produces results.

Talk to the competent sales engineer from Oriskany. You can count on him for sound, helpful advice on your felt problems. He is thoroughly familiar with the chemical treatments we have developed in our laboratories, and he can recommend design improvements that will help you make better paper products . . . faster . . . at less cost!

*First choice—because They last*

Oriskany

WATERBURY FELTS

H. WATERBURY and SONS COMPANY • ORISKANY, NEW YORK

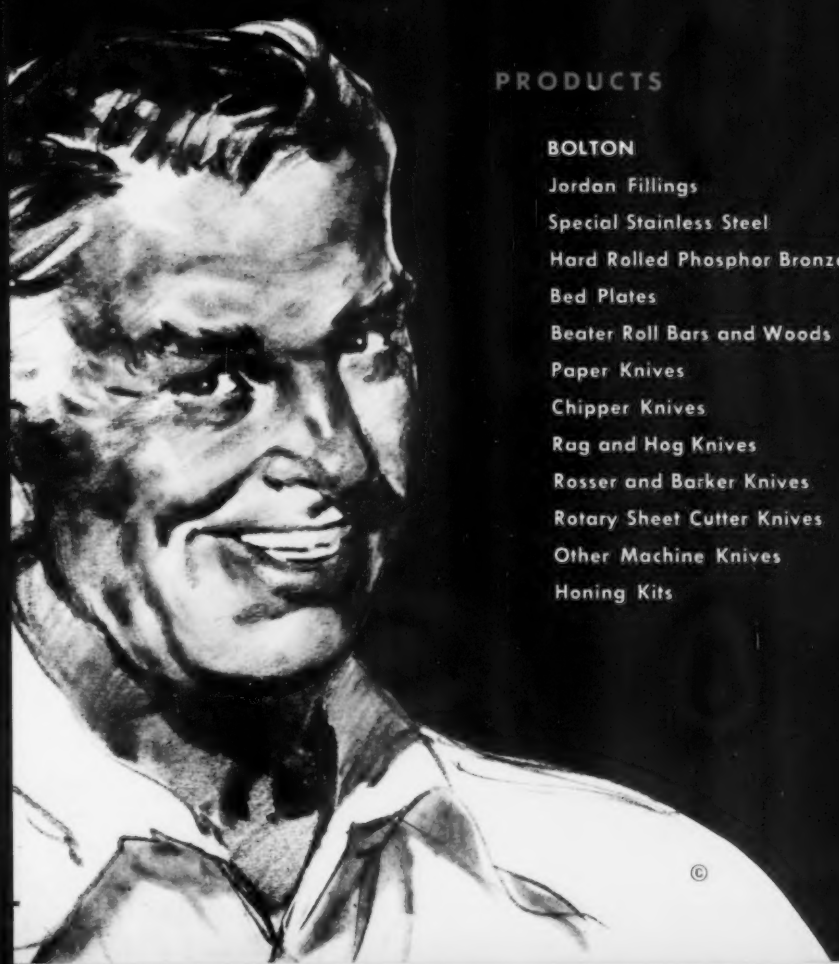
BOLTON EMERSON

TRADE MARK

# Partners with the Papermaker

This thumbnail presentation of BOLTON-EMERSON products is intended to serve as a convenient reference for the papermaker. With more than 50 years as specialists in the manufacture of machinery and equipment for the pulp and paper industry, BOLTON-EMERSON has gained wide recognition for products of indisputed quality and value.

Because of research, development and product improvement programs constantly in force, a BOLTON-EMERSON product list is never static. Full technical information on any of the products listed will be gladly furnished on request. A coupon for the purpose is provided on page 4, or contact your BOLTON-EMERSON sales representative.



## PRODUCTS

**BOLTON**

- Jordan Fillings
- Special Stainless Steel
- Hard Rolled Phosphor Bronze
- Bed Plates
- Beater Roll Bars and Woods
- Paper Knives
- Chipper Knives
- Rag and Hog Knives
- Rosser and Barker Knives
- Rotary Sheet Cutter Knives
- Other Machine Knives
- Honing Kits

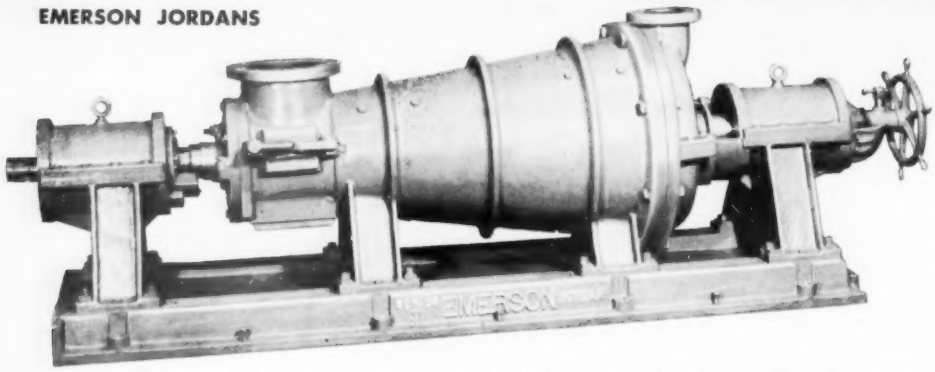
**EMERSON**

- Jordans
- Jordan Plugs
- Jordan Plug Control Systems
- Stainless Steel Jackets
- Pin Type Couplings
- Claflin Refiners
- Claflin Fillings
- Shower Pipes
- Suction Box Covers
- Magnetic Plates
- Magnetic Separators
- Magnetic Traps
- Beater Rolls

# BOLTON EMERSON Partners

TRADE MARK

## EMERSON JORDANS



| MODEL | TONNAGE | H.P. | R.P.M. |
|---|---|---|---|
| Series 11 | 6 | 15-25 | 750-1200 |
| Series 21 | 7-15 | 50-75 | 750-900 |
| Series 31 | 20-85 | 100-250 | 514-720 |
| Series 41 | 20-85 | 100-250 | 514-720 |
| No. 1-K | 25-75 | 150-250 | 450-514 |
| No. 2-K | 40-90 | 250-350 | 375-450 |
| No. 3-K | 40-80 | 200-300 | 350-500 |
| No. 4-K | 50-120 | 300-450 | 350-400 |
| No. 6-K | 45-100 | 350-400 | 400-425 |

Technical advisors are always available for consultation in selecting the proper equipment from the nine EMERSON models and the wide range of tackle from which to choose. Illustrated here is the Series 31 EMERSON, recommended for refining Kraft Liner Board, Kraft clippings, Corrugated Box, old News and Virgin Material, Book Ledger, Tissue and other grades of stock.

## JORDAN FILLINGS

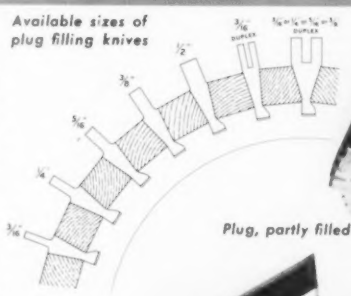
For any Jordan — with patterns for all Jordan plugs and shells in use today — Wedgeless, Ring Type and specially designed plugs — Hydro Truss and special assembled Shell Fillings.

In any metal — Special Heat Treated Steel, True Stainless Steel, Phosphor Bronze and other alloys.

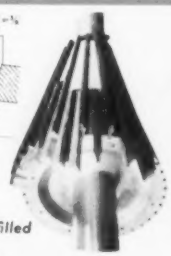
Knives in any shape or size — single, duplex or special arrangement, all widths and designs for brushing, cutting and all variations in between.

Fillers of kiln-dried, straight grain domestic and imported hardwood, Formica or RLY, new synthetic filler.

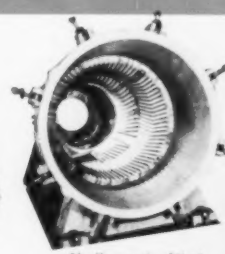
*Available sizes of plug filling knives*



*Plug, partly filled*



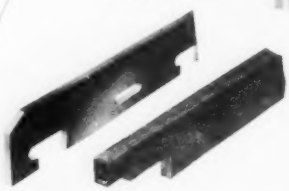
*Shell, partly filled*



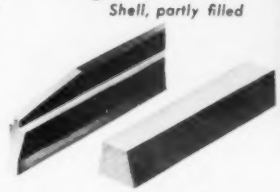
*Shell filling being fabricated*



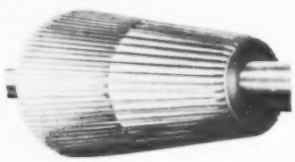
*BOLTON Ring Type Shell Fillings*



*BOLTON Wedgeless Plug Fillings*



## JORDAN PLUGS



Jordan Plugs of bandless construction are made of cast steel or iron to fit any Jordan engine in current use. Shafts are of forged steel hammered to exacting specifications. Jacketed plugs provide air tight non-corrosive, stainless steel protection over the entire plug body. All Jordan Plugs are slotted for BOLTON Wedgeless Plug Fillings.

## BOLTON SPECIAL STAINLESS STEEL

This is a high chrome nickel alloy, true stainless steel with additional alloys to increase hardness and stabilize corrosion resistance well beyond any fillings requirements. Resistance to corrosion is so great in BOLTON Special Stainless Steel that not a single failure has been encountered by any mill using it.

Steel bought to specification is heat-treated in Bolton furnaces under precise metallurgical control, which results in a stabilized stainless steel having more hardness and corrosion resistance than any the market affords.



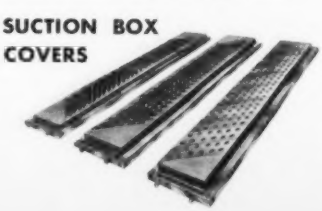
*Illustrated here is a piece of BOLTON Special Stainless Steel after undergoing an impact cold bend test of 65°. No visible signs of breaks or cracks exist.*

## SHOWER PIPES



Through the synchronized action of the flush valve, nozzles and wire cleanout brushes EMERSON Shower Pipes perform with equal efficiency in systems using recirculated, process water containing solids and in systems using fresh water in both pulp and paper mills.

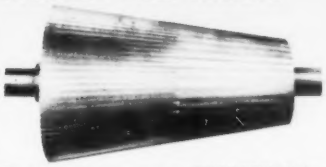
## SUCTION BOX COVERS



Framed in corrosion-resistant brass or stainless steel rails that are channeled for insertion of wooden strips EMERSON Suction Box Covers form a complete seal on any standard suction box for either wire or felt. While providing the maximum suction surface, freedom from streaking and clogging they outwear the conventional plank cover. EMERSON Suction Box Covers come in wax-impregnated, end-of-grain Vermont Rock Maple or plastic and have the exclusive economy feature of section replacements in the existing rails.

# with the Papermaker...

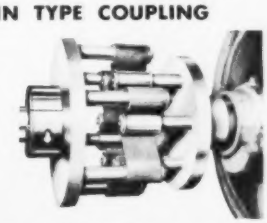
## STAINLESS STEEL JACKETS



By a patented process an EMERSON Stainless Steel Jacket can be mounted on any Jordan plug no matter what its material, condition, size or style. With new shaft sleeves, a stainless end plate mounted on the large end and stainless rings on both ends, the plug has complete protection from corrosion for enduring wear.

Stainless steel jackets are grooved and machined to take any size, interchangeable, BOLTON Wedgeless Plug Knives.

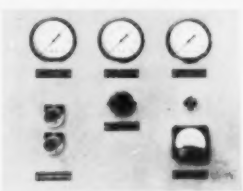
## PIN TYPE COUPLING



The New EMERSON Safety Pin Type Coupling is constructed entirely of steel, equipped with pins of the proper diameter for the required horsepower and top grade leather safety transmission belt. The flexibility of a full 9" lateral plug movement is provided with just one resetting.

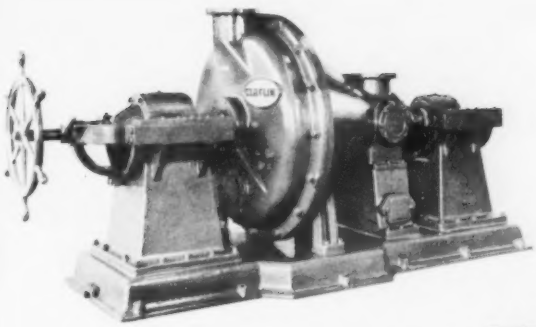
The Jordan half is made in two pieces and bored, fitted and keyed to the plug shaft. It can be installed, removed and repositioned easily using 2 Allen wrenches. The motor half is solid, bored and splined to fit the motor shaft.

## JORDAN PLUG CONTROL SYSTEM



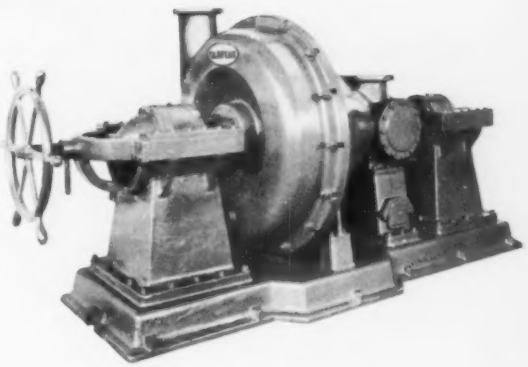
Constant plug pressure is maintained, regardless of fillings wear or any plug movement with the EMERSON Jordan Plug Control System. Once the proper plug position is determined and set on the instrument panel uniform fiber treatment is maintained. Operation is on the principle of air pressure forced against a diaphragm in in an air motor.

## EMERSON CLAFLINS



| MODEL | TONNAGE | H.P. | R.P.M. |
|---|---|---|---|
| 0 | 1-3 | 5-20 | 350-900 |
| 1 | 20-50 | 100-150 | 360-450 |
| 2 | 150 and up | 150-250 | 360-400 |
| 3 | 250 and up | 300-400 | 360-400 |

Known as the world's most versatile refiners EMERSON Claflins are noted for high production in primary refining, de-fibering and beating operations on all types of stock in both pulp mills and paper mills. Low in installation, operating and maintenance costs.



## CLAFLIN FILLINGS



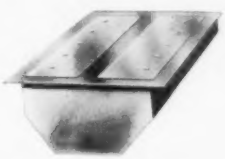
*FABRICATED Shell and Plug Fillings for clean stock refining. In one piece of chrome manganese or stainless steel, with or without wood fillers*

*HYDRATING Shell and Alloy Iron Plug Fillings for producing the light brush of extreme fibrillation*

*CAST STEEL Shell and Plug Fillings for rough stock refining. In one piece of manganese molybdenum with or without wood fillers*

*AUXILIARY PLUG, Plug and Shell Liner for quick change*

## PERMANENT MAGNETIC PLATES

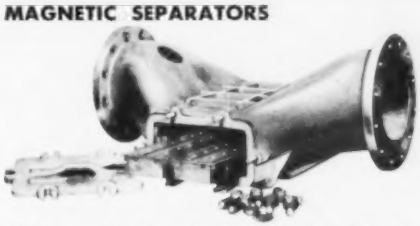


For tramp metal separation in pipes, ducts, lines, flow boxes, head boxes, belts, conveyors, troughs and on machines.

Standard Duty plates for moderate separation requirements, Heavy Duty plates for extreme cases, both available in plate widths of 10" to 48" with two inch gradations.

All magnets are cast of super strength Hyflux Alnico V, completely enclosed by the plate housing of non-magnetic stainless steel.

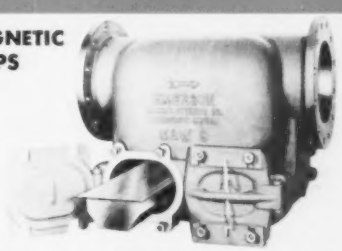
## MAGNETIC SEPARATORS



With no moving parts to wear out and requiring no power to operate EMERSON Magnetic Separators are equipped with permanent, sealed magnets for removal of tramp metal in flow lines having up to 70 pounds stock pressure.

Easy to install and maintain they are designed with standard class 125 C.I. pipe flanges for attachment to 6", 8", 10", 12", or 14" pipes. All stock is directed well within the magnetic range before continuing with no restriction to the flow.

## MAGNETIC TRAPS



Combining the principle of the trap with that of magnetic separation, the removal of large and small magnetic and non-magnetic material is accomplished with no restriction to the stock flow. Magnetic traps are equipped with permanent Heavy Duty plates.

Designed for installation on 6", 8", 10", 12" or 16" lines they are equipped with Standard Class 125 C.I. pipe flanges.

# BOLTON EMERSON
TRADE MARK

## Partners with the Papermaker...

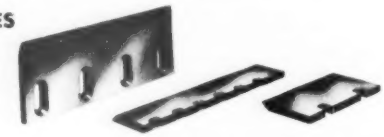
### PAPER KNIVES



Uniform hardness in the cutting edge assures the accuracy of clean, sharp cuts for long periods between grindings. Strength and toughness in the backing provide dependable performance under conditions of stress, shock, impact or abrasion.

*BOLTON High Speed Paper Knives* *BOLTON Carbon Steel Paper Knives*

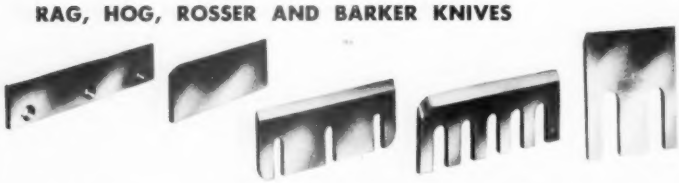
### CHIPPER KNIVES



Plant control by experienced craftsmen in every step of testing, hardening, tempering and grinding using highest quality cutting steels results in maximum uniform chipping between grindings with minimum waste.

*BOLTON Special High Speed Steel Chipper Knives* *BOLTON Standard Carbon Steel Chipper Knives*

### RAG, HOG, ROSSER AND BARKER KNIVES



Carefully tempered in electrically controlled heat furnaces with continuous instrument checking, BOLTON Rag, Hog, Rosser and Barker Knives will stay sharp longer and require less frequent grinding.

Made of BOLTON special analysis steel, high grade alloy, High Speed steel or to customer's specifications. Customer records kept to facilitate re-ordering.

### HONING KITS



Bolton Honing Kits were designed to help users of Bolton Paper Knives get greater value from knife investments. They come snugly packed in heavy duty containers that can be retained for convenient storage when not in use and consist of:

- *Duplex Special Hand Hone, 320 and 600 grit in metal container.*
- *Honing Stick.*
- *Two-gallon can of special Honing Liquid.*
- *Pan, screen and cover for Honing Liquid.*
- *Wooden blocks for positioning knife.*
- *Complete honing instructions.*

### ROTARY SHEET CUTTER KNIVES



Special tempering process gives the knives uniform hardness and long lasting cutting edges. Holes are precision drilled and tapped to insure correct fit. Available for all makes and kinds of cutters in High Speed steel and alloy grades.

### MACHINE KNIVES

Selected steel, complete plant fabricating facilities and rigid standards of precision craftsmanship for over 50 years have made Bolton Knives the standard for quality in machine knives. Bolton knives used in industry, include:

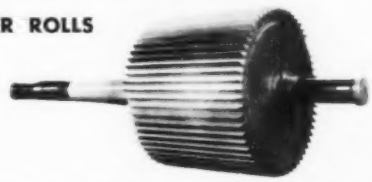
| | | |
|---|---|---|
| *Veneer* | *Granulating* | *Doctor Blades* |
| *Planer* | *Battery Separator* | *Shear Blades* |
| *Sheeter* | *Circular Cutters* | *Calliating* |

### BED PLATES



For all makes of beating engines BOLTON Bed Plates are supplied beveled or cireled, with or without wood fillings — elbow type, diagonal, combination, diamond, triple angle, herringbone, baffle, open center and other types to specification.

### BEATER ROLLS



Complete and ready for immediate beater installation, BOLTON Beater Rolls are the banded type and come with 2, 3 or 4 heads depending on bar lengths. Heads, machined to the same diameter, afford equal fly bar support at each position.

Slots in the heads are machined to assure accurate fit for the fly bars. Outside heads are provided with suitable clearer or banger irons. Properly tapered to fit any existing beater, the shaft is hammered forged steel and finished its entire length.

### BEATER ROLL BARS AND WOODS



BOLTON Beater Bars and Woods are available for all makes and sizes of beaters.

Bars are furnished with inside or outside slots — straight, serrated, corrugated or with any special edge specified. Either flat or beveled, they are furnished in regular quality steel, alloy steel, stainless, stainless welded to soft steel back, phosphor bronze or other metals to meet special conditions. All bars are machined on back and edge to a uniform width and to the size for correct fit in the roll.

Woods are made solely of kiln-dried, selected oak or maple stock and conform to exact specifications of all types of rolls to insure ease of filling.

---

**John W. BOLTON & Sons, Inc.**
**The Emerson Manufacturing Co. Division**
**Lawrence, Massachusetts**

*Please send me additional information on the equipment checked below:*

- ☐ Jordans and Fillings
- ☐ Stainless Steel Jackets
- ☐ Shower Pipes
- ☐ Suction Box Covers
- ☐ Magnetic Separation
- ☐ Claflins and Fillings
- ☐ Paper Knives
- ☐ Chipper Knives
- ☐ Bed Plates
- ☐ Beater Rolls
- ☐ Beater Bars and Woods
- ☐ Other, specify

*Name and title* _____

*Mill* _____

*City* _____ *State* _____


## John W. BOLTON & Sons, Inc.
### THE EMERSON MANUFACTURING COMPANY, DIVISION
### Lawrence, Massachusetts, U.S.A.

*Telephones:* MUrdock 6-6171-2-3-4

**CANADIAN REPRESENTATIVES:** PULP AND PAPER MILL ACCESSORIES, LTD. Montreal, P. Q.

**FOREIGN REPRESENTATIVES:** UNITED STATES MACHINERY CO., INC. 90 Broad Street, New York 4, N. Y.


Printed in U.S.A.




Since the day it opened, East Texas Pulp and Paper Company has employed the *best* methods to produce the *best* products for you. By using the proven Mathieson Chlorine Dioxide ($ClO_2$) bleaching process we are able to furnish you with a very "high brightness" pulp, exceptionally clean, and with retention of full strength characteristics.

**EAST TEXAS**
*Pulp and Paper Company*

*Evadale, Texas* — Telephone Silsbee, Texas, Evergreen 5-3711

*Western Sales Office*
1003 Builders Bldg., Chicago, Illinois
Telephone RAndolph 6-1068

*Eastern Sales Office*
122 East 42nd St., New York City
Telephone OXford 7-2980



### Maintenance engineering

You can arrange to have a Honeywell service engineer visit your plant at regular intervals to inspect, clean, and adjust your instruments and controls. He's factory-trained and field-experienced in keeping good instruments in top operating condition. If an emergency should arise, a phone call will bring a Honeywell service engineer to your plant in a hurry.



### Spare parts, in a rush

A Honeywell branch office near you can be your storeroom for standard parts . . . in addition, the Parts Depot in Philadelphia carries a complete stock of all normally used parts. With Honeywell stocking your spare parts, you save storage and inventory control costs. Most shipments are made within 24 hours after orders are received.

## Service is the



### Practical service training

The tuition-free Honeywell Training School teaches your instrument technicians the most up-to-date maintenance methods, fits them for the kind of problems they may encounter on the job. Intensive courses range from two to fourteen weeks.



### Application engineering

Experienced Honeywell application engineers know your industry and processes. They design *complete* systems of instrumentation, reducing the work of your own engineering staff. From the broad Honeywell line, they recommend instruments that are exactly right for the job. And because Honeywell supplies all types of instruments, recommendations are made without bias. Service engineers will, if needed, help with installation and startup of your system.

# big extra you get with Honeywell instrumentation

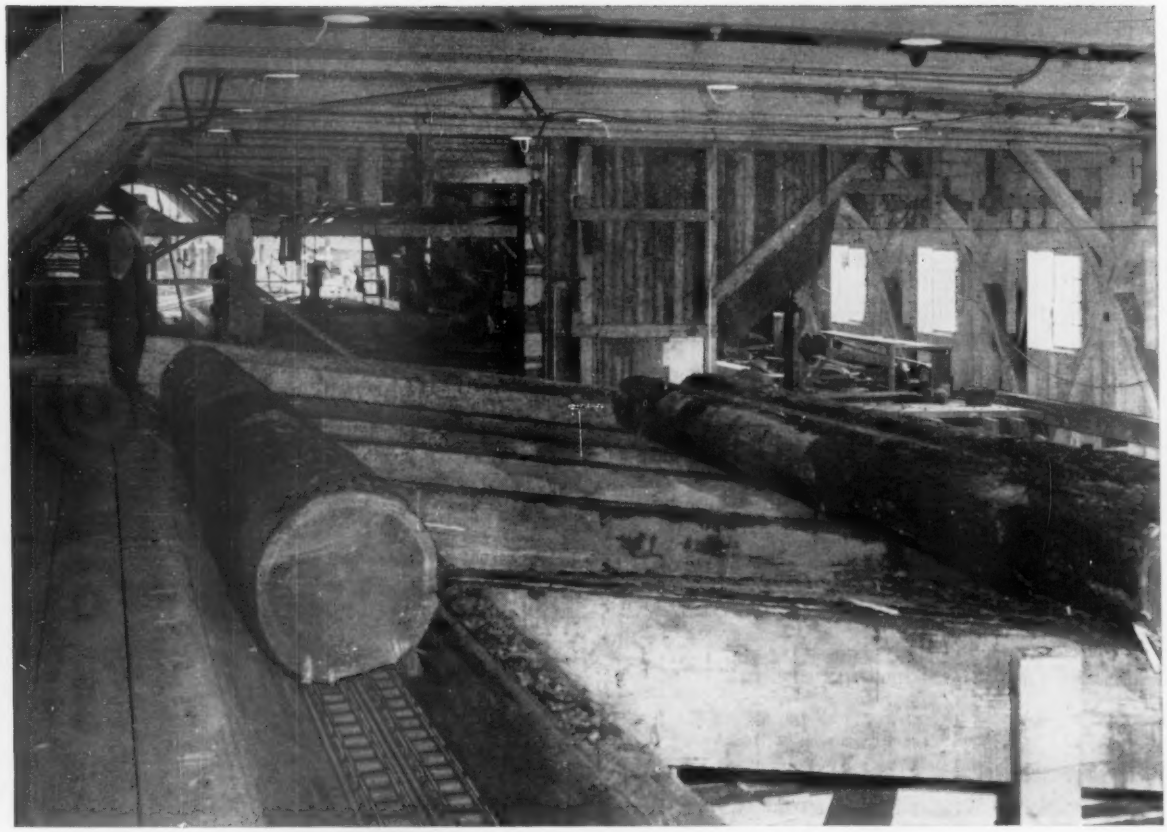
Honeywell offers you far more than instruments. You get service whenever and wherever you need it . . . service that begins when you first decide you need instruments, and continues long after they're installed. This service is always conveniently close at hand, for there are more than 110 Honeywell sales and service centers located strategically throughout the U. S. and Canada.

Prompt, competent service by nearby field specialists is an important plus-value of Honeywell instrumentation. Your local Honeywell sales engineer has all the facts on this service as it relates to your instrumentation needs. Give him a call . . . he's as near as your phone.

MINNEAPOLIS-HONEYWELL REGULATOR CO., *Industrial Division*, Wayne and Windrim Avenues, Philadelphia 44, Pa.—in Canada, Toronto 17, Ontario.

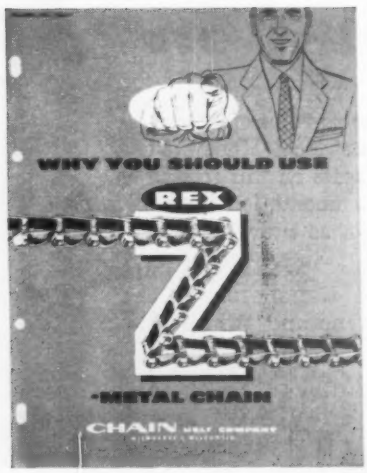
H HONEYWELL

MINNEAPOLIS Honeywell
BROWN INSTRUMENTS
First in Controls



# REX® Z-METAL CHAINS

## "LASTED 3 TIMES LONGER"




Here's a typical example of the way you can cut costs...get better service with Rex Z-Metal Chains in your mill.

On this transfer conveyor, standard malleable chains needed replacement every 15 months. It was replaced by a Rex Z-Metal Chain. Z-Metal operated for more than four years before it needed replacement.

This isn't the unusual story. It's typical of the ability of Rex Z-Metal Chains to withstand the pounding of logs...the heavy loads...the abrasive sliding service. Many mills have had even more success with these rugged, long-lasting chains.

Rex Z-Metal Chains are available in all styles used in the forest products industry...fit over the same sprockets as standard malleable chain. Why not get the complete story on how you can get more for your chain dollar? See your CHAIN Belt Man or Distributor, or write for your copy of Bulletin No. 53-56. CHAIN Belt Company, 4691 W. Greenfield Ave., Milwaukee 1, Wis.

# CHAIN BELT COMPANY

**District Sales Offices and Distributors in all principal cities**

# now

**for...**

semichemical pulp

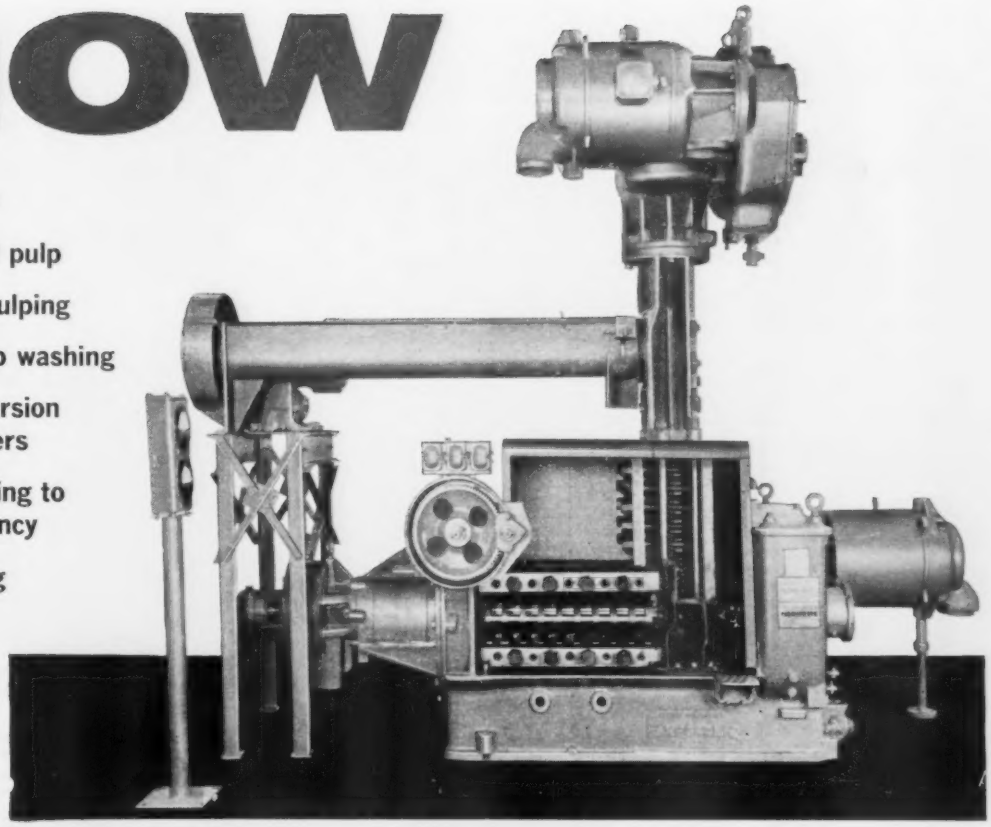
mechanical pulping

chemical pulp washing

asphalt dispersion in waste papers

pulp dewatering to high consistency

bark pressing



## SPROUT-WALDRON – ANDERSON

# FIBERPRESS

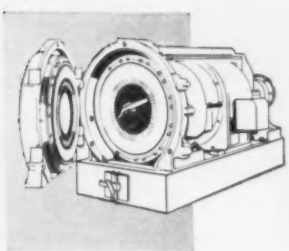
The FiberPress is a screw press of very heavy construction. It has two important functions: black liquor removal and fiberizing action. Both are very important in semichemical mill operation. At least 16 FiberPresses will be in operation in these applications in U.S. and foreign mills by December.

The FiberPress, followed by the SW refiner, forms a mechanical pulping system that produces superior quality mechanical or chemimechanical pulp from chipped or hogged conifers and hard woods.

For lighter applications: the SW-Anderson Moisture Expeller.

*For careful analysis and specific recommendations, send your pulping problems to Sprout-Waldron. Address: Sprout-Waldron & Co., Inc., 32 Logan Street, Muncy, Pa., U.S.A.*

SW



**SPROUT-WALDRON**

**PULP MILL EQUIPMENT**

PP/412


new source of high quality lime
...quicklime and hydrate
West End, supplier of quality chemicals for over 31 years, proudly announces expansion of its hydrate and quicklime production. Discovery of an extensive deposit of high grade limerock resulted in the construction of a large new processing plant. The photo shown here is of the giant 340 foot rotary kiln. The plant will soon be producing increased quantities of highest quality lime to serve the needs of growing western industry.
We suggest you give consideration to West End as a primary source of supply. Inquiries and your specifications are invited.
WEST END
West End Chemical Company
SODA ASH • BORAX • SODIUM SULFATE • SALT CAKE • HYDRATED LIME
EXECUTIVE OFFICES, 1956 WEBSTER, OAKLAND 12, CALIFORNIA • PLANT, WESTEND, CALIFORNIA



*EASTMAN KODAK COMPANY, Rochester, N.Y.*

**STOCK DOESN'T STRATIFY** in this LIGHTNIN-mixed chest. From top to bottom, every pound stays at the same consistency. Thorough mixing levels out consistency fluctuations of incoming stock, providing a uniform effluent.

# *How Kodak gets* **uniform stock** *out of the machine chest*

Here's evidence that the way you mix stock in the chest can make a powerful difference on the wire.

At Eastman Kodak Company, a uniform sheet is a "must" in producing top-grade photographic papers. Stock settling or stratifying in the machine chest could make the sheet vary, first above, then below the critical weight limits.

Kodak helps solve this quality problem with LIGHTNIN Mixers in mixing and machine chests. The LIGHTNIN you see here puts just enough horsepower into the chest to keep stock flowing in a diagonal pattern, constantly intermixing and equalizing the entire chest contents. Another factor in maintaining uniformity, in this installation, is a level-control in the machine chest.

**Uniform within 0.2%**

Incoming stock is dispersed uniformly throughout the chest. Consistency differential between top and bottom of the chest averages only 0.1%, with 0.2% the maximum range.

This thorough mixing "irons out" the fluctuations in stock consistency caused by heavier or lighter stock coming into the chest.

It provides a highly uniform effluent, greatly reducing demand on the consistency controller. Rewards include a uniform sheet, obtained with a minimum of headbox corrections.

**How you can get results like these**

You can get results comparable to these, out of your stock chests. Blend stock of different types; control color; add size and other ingredients—with full uniformity—in as little as *six minutes.*

LIGHTNIN Mixers are delivering uniform stock in more than 35 mills. In practically every case, mixing results are fully predictable—unconditionally guaranteed.

For quick, competent help, call in your LIGHTNIN Mixer representative. He's listed in Thomas' Register. Or write us direct.

**Lightnin® Mixers**

**MIXCO fluid mixing specialists**

**NO BAFFLES** are needed in chest. LIGHTNIN Mixer, positioned off center, produces uniform stock in six minutes from standstill, without swirl or vortex.



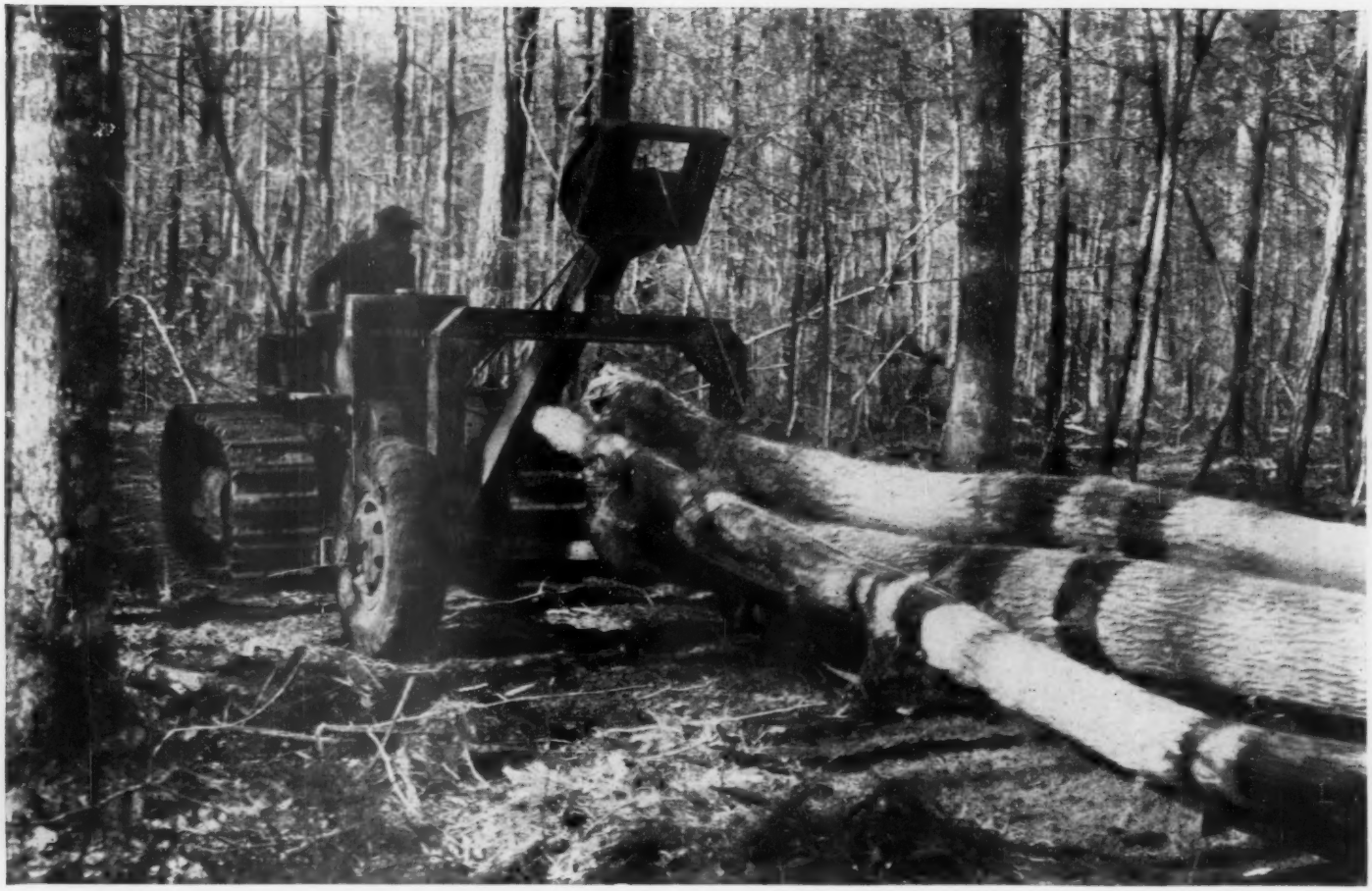
**FOR LATEST MIXING INFORMATION and full description of LIGHTNIN Mixers, send for these helpful bulletins:**

- ☐ B-102 Top or bottom entering; turbine, paddle, and propeller types: 1 to 500 HP
- ☐ B-103 Top entering; propeller types: ¼ to 3 HP
- ☐ B-108 Portable: ⅛ to 3 HP
- ☐ B-104 Side entering: 1 to 25 HP
- ☐ B-112 Laboratory and small-batch production types
- ☐ B-109 Condensed catalog showing all types
- ☐ B-111 Quick-change rotary mechanical seals for pressure and vacuum mixing
- ☐ Paper stock mixing data sheet for figuring mixer requirements

Check, clip, and mail with your name, title, company address to:

**MIXING EQUIPMENT Co., Inc., 141-jMt. Read Blvd., Rochester 11, N. Y.**

*In Canada: Greey Mixing Equipment, Ltd., Toronto 10, Ont.*



# "International® Crawlers and *give work-speeding capacity..great*

**Contract-logging an estimated 7,000,000** board-feet of pine and hardwood from the Green Meadow Tract in Colleton County, S. C., Vance Hudson, Walterboro, bases his operation on four International crawlers. (Large view above shows one of Mr. Hudson's TD-9's arch-skidding a load of three tree-length logs.)

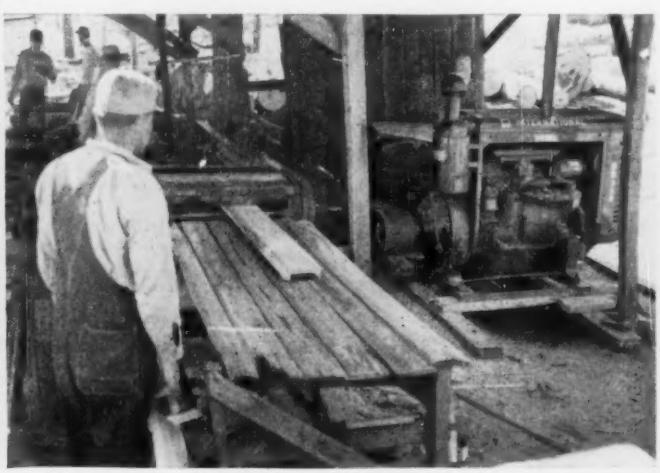
This operation consists of selectively logging marked timber from extremely rough woods under swamp conditions. Two TD-14's and two TD-9's are averaging 40,000 board feet per 8-hour day—besides helping loaded trucks to the highway.

Regarding his preference for International crawlers,

**(Below) Bonus-power of this TD-14,** equipped with dozer and Carco Winch, speed the job of clearing a new "landing." The TD-14 is another high-producing member of the Vance Hudson fleet (note large view above).

**"Our production has doubled** with the International UD-350 power unit, and fuel cost has dropped," reports the sawyer for Vane Voyles mill, Winona, Mo. Outfit cuts 1,000 bf of oak per hr.—mainly railroad ties and dimension lumber.

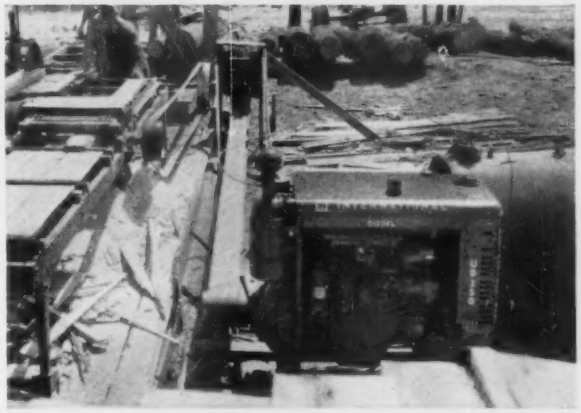




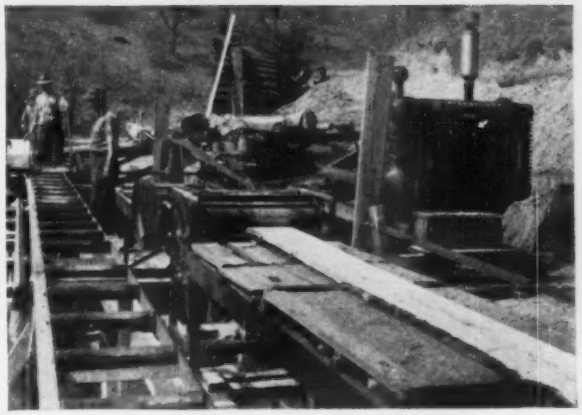




**Arch-skidding 100 cords per 40 hrs.** on 1000-ft. haul under swamp conditions, this TD-6 averages 2 cords per load. "This is my second TD-6 logging tractor, and I have been well pleased with the economy and performance of these tractors in pulpwood logging," states David Jackson, Summerville, S. C.



**Producing 8,000 bf of red and white oak daily** as railroad ties and lumber, an International UD-350 powers "the whole show" on only 1½ gallons of fuel per hour. "Big hourly cut, low fuel cost, snappy power to keep saw rpm constant are reasons we like our new International power unit," reports Otis Douglas, for Douglas Sawmill, Winona, Mo.



**"This International UD-350 is the most economical engine I ever used,"** declares O. W. Webb, Sevierville, Tenn. "It powers our complete sawmill operation, producing 8 to 10M board feet per 8 hours on 14 gallons of diesel fuel. Easy-starting, plenty of power, fast-governing for constant saw speed."

# Power Units *operating ease"*

Mr. Hudson reports: "During 10 years of South Carolina low-country logging, I've used all types of equipment, from mules to tractors. International crawlers have proved to be best for all-around logging conditions. They are the best balanced logging tractors and have been more economical to operate than any others I've ever used."

**See you at the ROAD SHOW— CHICAGO Jan. 27 to Feb. 4, 1957**

**Prove the extra value** of famous International exclusives like seconds-fast gasoline conversion starting—and ball-joint mounted track frames, for *free-action* rough ground traction. Try *new* bonus-power — *new* booster steering — *new* Cerametallic engine clutch action. Compare heavy-duty International Power Units to any others! Ask your distributor for a demonstration!

INTERNATIONAL HARVESTER

## INTERNATIONAL® Construction Equipment

International Harvester Company, 180 N. Michigan Avenue, Chicago 1, Illinois

A COMPLETE POWER PACKAGE INCLUDING: Crawler, Wheel, and Pipe-Boom Tractors . . . Self-Propelled Scrapers and Bottom-Dumps . . . Crawler and Rubber-Tired Loaders . . . Off-Highway Trucks . . . Diesel and Carbureted Engines . . . Motor Trucks



**Allis-Chalmers advanced design keeps W. C. "Bill" Crum's HD-11 producing more in Louisiana swamps**



***Beats the Mud.*** White Castle, La.—W. C. Crum works his Allis-Chalmers HD-11 six days a week in the swamps. It clears loading areas, snakes logs, tows dual-trailer logging trucks and bulldozes . . . most of the time through deep, soft mud. Yet lubrication is no problem. Truck wheels, idlers and support rollers; mounted on tapered roller bearings; are protected by Positive Seals that keep swamp mud and water out, grease in . . . require lubrication only once every 1,000 working hours.

# *Built for the mud . . . shocks . . . strains . . . of SWAMP LOGGING*



***Gives Extra Flotation.*** Short, compact Box-A Main Frame allows close-in mounting of dozer . . . permits use of wider track shoes for better over-all tractor balance, extra flotation in soft going. Double-reduction final drives give the extra clearance needed for logging.

***Soaks up Shocks and Strains.*** The HD-11's one-piece steering clutch and final drive housing takes up the strain of heavy loads and high drawbar pull . . . keeps drive gears in alignment, lengthens their life. The all-steel Box-A Main Frame protects engine and power train from shocks.

Bill Crum says, *"My HD-11 does the work of two smaller tractors . . . can't get along without it on my jobs in the swamp."*

Your Allis-Chalmers dealer will be glad to demonstrate the HD-11's money-making abilities on your type of logging.

ALLIS-CHALMERS, CONSTRUCTION MACHINERY DIVISION, MILWAUKEE 1, WISCONSIN

**ALLIS-CHALMERS**

**HD-11**

**85 belt hp • 24,600 lb approx. (equipped with hydraulic dozer)**




# PULPWOOD HANDLING AT ROME KRAFT

## DiesELectric Helps Handle 1300 Cords of Pulpwood Daily!

Peeling logs *before* storage is a new concept in pulpwood handling at Rome Kraft Co. The North Georgia firm receives approximately 1300 cords of pulpwood daily—by rail and truck—from producers in four states! This staggering volume of pulpwood is unloaded onto three conveyors that feed the drum barkers. From there, the logs go into storage. In Rome Kraft's big woodyard, a 40-ton American DiesELectric* Locomotive Crane unloads railcars, trucks and truck-trailers—dumping the pulpwood directly onto the conveyors!

For big yard operations, like Rome Kraft's, American's DiesELectric system is tops—electric powered trucks move the crane around the yard quickly—smoothly, can even perform switching jobs! And, with an American, you can raise or lower the boom—swing—travel *and* hoist all at the same time! A real time saver that's vitally important when you're working all around the yard! To learn why American Locomotive Cranes—offered in 25 to 80-ton capacities—operate at lower cost while doing more work, write:

**AMERICAN HOIST**
and Derrick Company
St. Paul 1, Minnesota

* Registered Trademark. Diesel-Electric Locomotive Crane U.S. Patent No. 2083460, Canadian Patent No. 368226 and Touch Control U.S. Patent No. 2370859 granted to American Hoist and Derrick Co.

# TOP PRODUCTION IN THE BIGGEST TIMBER




## The most powerful one-man chain saw you can own

The new Homelite 7-29 gives you the three key features you need for top production in the biggest timber . . . dependable power, quick starting, easier handling.

— *you can depend on the power*, a full 7 horsepower, to bring down trees up to 10 feet in diameter quickly . . . yet weighing only 29 pounds, it's light enough for work in small trees.

— *you can depend on quick starting* and smooth, continuous economical operation in the most extreme weather conditions, with the 7-29.

— *you can depend on easier handling* too — in the roughest terrain. Because the 7-29 is perfectly balanced letting you cut from any position, any angle, with no adjustments, no loss of power. This means more production time, greater profits.

**7 HORSEPOWER**

**29 POUNDS**

*Ask for a Free Demonstration Today!*

### Complete Line of Chain Saws for every Cutting Job



**Model 17** — an all-purpose saw that brings down trees up to 4 feet in diameter. Available with special brush cutting and clearing attachments for complete versatility. 3½ horsepower, 20 pounds.



**Model 5-20** — All the versatility of the 17 with added power. 5 full horsepower — 20 pounds. Brings down trees up to 6 feet in diameter.



**Model EZ** — lightest, most powerful direct drive chain saw ever developed. Only 19 pounds, full 5 horsepower. Brings down trees up to 3 feet in diameter.




**HOMELITE** Manufacturers of Carryable

*A DIVISION OF TEXTRON INC.*

**7709 RIVERDALE AVENUE, PORT CHESTER, NEW YORK**

**PUMPS · GENERATORS**
**BLOWERS**
**CHAIN SAWS**

In Canada: Terry Machinery Co., Ltd.

W. LAWSON BRANNON
BETHUNE, SOUTH CAROLINA, reports...

# "LORAIN-Dixie CRANE
## *has proved very satisfactory"*

## 6-ton Capacity
## Low Cost
## Sturdy Design
## High Speed
## Economical

Owners of Lorain-Dixie Pulpwood Handling Cranes everywhere are reporting "complete satisfaction" with this money-making machine. Many pulpwood producers and mills that long believed a loader of this type to be "too expensive" have proved the Lorain-Dixie their best investment.

It is low in first cost. It saves time and money over hand labor or limited-duty loaders. And there's lots more value in a Lorain-Dixie than other loaders of its size. From the ground up, the Lorain-Dixie is built to the high Lorain quality standards, incorporating features such as these: clean-cut, simple design for easy service; squatty, low center of gravity — no bounce, no rock; 5 interchangeable hydraulic clutches; separate oil reservoir and independent system for each clutch; all spur gears are machine cut; all horizontal power shafts on anti-friction bearings — each shaft separately and easily removed; economical operation — uses only one gallon of fuel per hour.

There is a selection of 3 factory-approved rubber-tire carriers, or you can mount the Lorain-Dixie on your own truck. Feature for feature, dollar for dollar, nothing compares with the 6-ton Lorain-Dixie. You make the comparison . . . see your Thew-Lorain Distributor for facts and figures!

*At the collection yard, W. Lawson Brannon's 6-ton Lorain-Dixie Crane loads out 7 cars a day from trucks or cold decks. Logs vary from 8' to 18' long x 12" to 30" in diameter. 40 to 50M bd. ft. are handled per day, depending on the size of the logs.*




THE THEW SHOVEL CO., LORAIN, OHIO

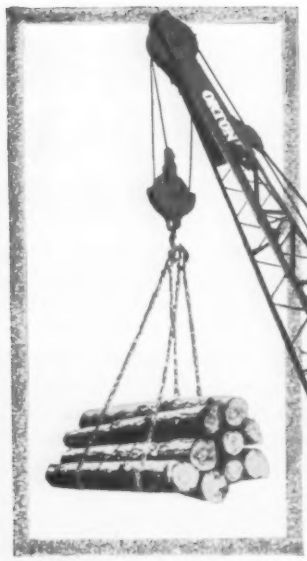
THEW LORAIN

# ORTON

*Torque-Control*

**DIESEL CRANES**

FOR PULP
AND PAPER
HANDLING





*When your handling problems are many . . . and complex, keep in mind that an*

**ORTON Crane is built specifically for each job.**

*Your handling problem is our problem*

**We would like to work with you.**

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**ORTON** **CRANE & SHOVEL COMPANY**
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# How Close Attention to QUALITY takes Pulpwood Profits out of "Deep Freeze"



*Quality in manufacture* — Gleason flame hardening instills long-life wearing quality where it counts most on gears and pinions—extra hardness where drive teeth mesh.

*Quality in materials* — Carefully measured alloys are added to 8-ton charge in electric furnace; heats are triple-tested to exacting specifications — extra assurance that only the best materials go into Bucyrus-Eries all down the line.

BUCYRUS ERIE

On snow-covered tracts in northern Minnesota and in temperatures to 50 degrees below zero, Bucyrus-Erie 22-B's are important factors in profitable pulpwood production. They're moving lumber that might otherwise spend the winter in "deep-freeze" . . . along with the logger's profits. Deep in the woods, the Bucyrus-Erie 22-B shown above uses a Mack 3/4-cord pulpwood grapple to load 100-in. bucked logs from stockpile to truck . . . averages 450 cords per 10-hr. day. At railroad transfer points, three other 22-B's keep busy unloading trucks, stockpiling, and loading flatcars.

Rugged durability that withstands the elements is a direct result of Bucyrus-Erie's constant close attention — during manufacture — to the little things that mean outstanding quality. At Bucyrus-Erie, quality comes FIRST — in design, materials, manufacture and service. At work in pulpwood country, it means steady high production at low cost year after year.

See your nearby Bucyrus-Erie distributor today for information on the popular 1/2-yd. 15-B and 3/4-yd. 22-B models, each convertible to shovel, dragline, clamshell or dragshovel front end for excavating duties. For rubber-tired mobility, ask him about the 15-B and 22-B Transit Cranes.

232E56

**BUCYRUS-ERIE COMPANY**

South Milwaukee, Wisconsin

*With the flick of the wrists*

# ..LOADS 3 CORDS OF PULPWOOD IN 6 MINUTES!

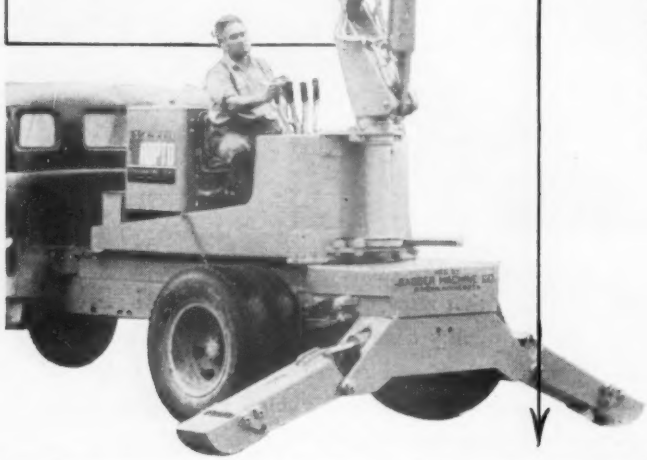


## HOPTO

*Completely Hydraulic* **LOG GRAPPLE**

**CHECK THESE EXCLUSIVE HOPTO FEATURES**

- Variable speed swing control turns boom through 307°.
- Double relief valve in swing circuit cushions boom swing for faster, safer operation.
- Full 18-foot clearance with a quarter cord of 8-foot pulpwood.
- Heavy-duty hydraulic system with double wire braided hoses and heavy-duty pipe fittings on all high pressure lines.
- Built-in relief valve in 1500 PSI system.
- All controls conveniently located for operator. Boom is never over or above operator.
- Highly mobile. Mounts on any one-and-a-half ton or larger truck!
- Long reach! Maximum surface reach on ground line is 17 feet, 15 feet at 12-foot height. All measurements from boom mounting.
- Positive power on Grapple and positive down pressure assures full grapple every time.
- Grapple available for both 8 foot and 4 foot length pulpwood.



18' CLEARANCE

***HOPTO BREAKS THE HANDLING BOTTLENECK***

Conveniently located face-forward levers actuate every movement of this work-hungry grapple! HOPTO mounts on any one-and-a-half ton or larger truck . . . gives you a highly mobile, *low-cost* unit. Operator levels HOPTO on individually operated hydraulic outriggers from his regular operating position. Set-ups are quickly and conveniently made for safe operation.

***30 SECOND LOADING CYCLE!***

HOPTO reaches out 15 feet beyond boom mounting to take quarter-cord bite from largest truck or gondola, quickly swings up to 307°, and returns for another load, *all in 30 seconds!* HOPTO loads as many as seven railroad cars in a single day! It's the fast-cycling, completely hydraulic unit. Exclusive HOPTO safety engineered features and ease of handling recommend it as the low-cost pulpwood handler.




***WRITE TODAY for complete information!***

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# *Shovel-Crane owners!*

# sharing your profits with old-fashioned clutches?



**Remember the day the weather was fine, footing good and you were really moving pulpwood . . .**

THAT was the day it looked as though you were going to set a new yard record. But the clutches were getting hotter all the time. By mid-morning the shovel-crane went down for clutch adjustment—the heat had done it. After the noon break, the same thing happened. How many cords of wood do you figure you were penalized for having a rig with old-fashioned clutches?

**Avoid costly downtime**

With a Link-Belt Speeder you get modern power hydraulic-actuated clutches that automatically compensate for heat and normal lining wear. In fact, most Link-Belt Speeder owners will tell you these clutches are so good, adjustment is needed only once or twice a month.

It's just one of many ways you're big money ahead with a Link-Belt Speeder.

Get the complete story from your distributor. He'll show that whatever rigs you need—crawler or rubber-tired . . . ½ to 3-yd, 8 to 60-ton capacity—you'll earn bigger return on your equipment dollars with a Link-Belt Speeder. Or write for literature—LINK-BELT SPEEDER CORPORATION, CEDAR RAPIDS, IOWA. 13,001

**LINK-BELT SPEEDER**

*Builders of a complete line of crawler and rubber-tired shovel-cranes.*





**IMPROVED UTILIZATION IN ACTION AT BROWN COMPANY.** At left, sawmill chips, veneer cores and pulpwood converge at Berlin, after varied existence since leaving forests. Sawmill logs and veneer logs, separated in the woods from pulpwood trees, have gone their respective ways, fulfilled their purpose and now provide greater economic usefulness as source for pulp fiber. At right, winter hardwood being debarked—and as any woodyard operator knows, just about the hardest thing to bark. Clean-as-whistle job is being done on Brown Co.'s. new Soderhamn flail type debarker.









# Every Fiber Counts at Brown

## Through stepped-up mechanization, improved utilization and integrated logging

• Every fiber counts in a balanced wood usage program of integrated logging, stepped-up mechanization and improved utilization at Brown Co., Berlin, N.H.

"Balanced wood usage is understanding your raw materials and their proper use by making grades for which they are best suited," A. E. Harold Fair, president, told PULP & PAPER. "At Brown Co., we think in terms of following the living fiber in the bush through to the finished manufactured product in the customer's hands."

Brown Co. is an integrated lumber, pulp, paper and chemical plant with operations centered at Berlin (accent is on BERlin) and also at Gorham, two miles downstream on the Androscoggin River. Within a 50-mile radius of Berlin are some 3,600,000 heavily timbered acres. These include one of the finest stands of Northern hardwoods in addition to spruce-fir stands abundant in Northern New England.

Brown has about 511,555 acres in Maine, Vermont and New Hampshire under practical management for continuous yield since 1900. The company also jointly owns some 300,000 acres. Total holdings are comparable to an area equal to Rhode Island.

"The growth alone on these 800,000 acres is sufficient for more than half our requirements," stressed Mr. Fair, adding that "with proper management this area will support not only today's program but an expanded program in perpetuity."

Brown also buys wood from some 1,500 farmers (500 in Maine, 600 in New Hampshire and 400 in Vermont) with production ranging from one truckload to 4,000 cords. Under its "Tree for a Tree" program, now in its sixth year, Brown has distributed some 750,000 seedlings at no cost to the receiver. Allocation of seedlings is made to producers of 100 cords of pulpwood on the basis of 15 to 20 trees per cord.

**15 CORDS PER ACRE** . . . Average pulpwood yield, according to C. S. "Pat" Herr, vice president in charge of all woods operations, is about 15 cords/acre, with some lands yielding up to 24 cords and others 6 to 8 cords.

"What we're trying to do," he explained, "is to wring new products from each tree. There's no denying that Southern softwoods are low in cost and forest growth is fast. Southern and Western woods, however, generally have fibers which are basi-

**PRODUCTIVE LOGGING AT BROWN CO. MEANS** . . . (top to bottom) 250 trucks and 15 cranes (That's a Bucyrus Erie unloading sawlogs) . . . 35 tractors . . . (Allis-Chalmers HD-9 diesel skids logs to central bucking site) . . . 600 miles of company roads and . . . of course, "Old Reliable" —the horse.



A. E. HAROLD FAIR, President, Brown Co., Berlin, N.H.—"What we're trying to do is wring new products from each tree." Immediate goal: 800 tons per day of pulp (400 sulfite; 350 kraft and 50 semi-chemical pulp). Ultimate goal: 1,000 tons a day.

cally different than those in the North."

"Only recently," he continued, warming to a favorite topic, "has it been appreciated that certain Northern species of hardwoods have superior characteristics to others. These differences can be accentuated and used to advantage by both."

**INTEGRATED LOGGING . . .** This means harvesting large softwood and hardwood logs along with pulpwood. "This is important," stresses Mr. Herr, "because through it we get the greatest possible return from the forests. Selected logs are processed at the mill into products which have a far greater market value per unit of wood volume than would be realized from a similar unit of wood converted to chips for pulp and paper." Brown has three sawmills at Berlin with a capacity of better than 25 million bd. ft.

"Another important factor," continued Mr. Herr, "is that these higher value products help pay higher costs of cutting and transporting wood from more remote areas where it would ordinarily be economically impractical to operate for pulpwood alone."

**STEPPED-UP MECHANIZATION . . .** Brown has swung from phase I —the chain saw—to phase II—mechanization from tree to woodyard. To achieve this, Brown uses 250 trucks; 20 trailers; 15 cranes; 35 tractors (all bulldozers to double on road construction); 1 flatbed trailer for transporting mechanical equipment; 2 rubber-tired 4-wheel tractors; 6 sulkies; 1 road grader; and 2 fire trucks.

The bulk of this equipment is rented from local contractors and farmers, with about 15% rented from U-Dryvit.

In three geographical logging districts, there are 14 portable, modern camps. Each district has its own logging superintendent; Milton W. Harriman at Androscoggin, Alton Oleson at Lake, and Lawrence Parsons at Parmachenee.

Company roads total around 600 miles, of which about 125 miles are gravel and the rest woods roads. "Most of these," reported Mr. Herr, "are comparable, and in some cases, better than township roads."

Good roads put the woodsmen in the class of commuters. No longer are the men "stuck" in the woods for a season or more than a week. Some, whose homes are near, will go home nights and others for weekends.

**CAMPS HAVE CHANGED . . .** "Better living conditions in these modern camps, coupled with good roads are attracting a better class of woodsmen," J. Omer Lang, woods personnel supervisor, told PULP & PAPER.

"By golly," he exclaimed, "some people still think that we have the old hell-raisers we used to have 10 or 15 years ago. Lots of our boys have college training and believe me they make pretty darn good pay."

"For instance," he continued, "a good cutter with chain saw can make $175 to $200 a week. Pulpwood buckers earn about $90 a week. That's mainly because they can work faster at less tiring pace with chain saws."

The new camps, with up-to-date facilities, feature refrigerators, showers, hot and cold water and facilities for drying clothes. One "commuter" had a portable TV set in his sleeping quarters.

In the forests, men, chain saws, tractors, sulkies, cranes, trucks and trailers all add up to more wood produced at less effort and better pay.

**SKIDDING TECHNIQUES . . .** As the good-sized Northern trees are felled by chain saws, they are tree-length skidded by Allis-Chalmers, Caterpillar and International tractors of the D-4 and D-6 classes, to a central bucking site. In dry weather, sulkies may be used at some locations for skidding. Brown also has a few 4-wheel rubber-tired tractors of the Blue Ox class.



C. S. "PAT" HERR, Vice President—Woods, Brown Co.—"Through integrated logging we get the greatest possible return from the forests."

Sprawled among the 80,000 acres of the Parmachenee logging district, visited by PULP & PAPER, are eight logging camps, described by one woods worker as motels for woodsmen.

Here begins an integrated flow of 15,000 cords of hardwood and softwood logs and about 50,000 cords of softwood and 40,000 cords of hardwood pulpwood. The softwood is usually river driven.

When operations are at full peak throughout the 3 logging areas, some 1,000 men will swarm through the woods. At Parmachenee, 400 men alone will be cutting.

Michigan cranes with tongs or bucket grapples load the pulpwood or sawlogs onto trucks for hauling either to the mill or for storage on the frozen ice surfaces of Aziscoos Lake, or the Androscoggin River. In the time of the spring thaws this is still an economical method of getting the logs to the mill.



**KEEPING KEEN EYE ON WOOD MOVEMENT.** BURT CORKUM (left), Asst. District Logging Supt., and JOHN BORK, Asst. General Logging Supt., caught by P&P camera just as they were heading out for day's work in Parmachenee logging district.



**IN THE WOODS CUTTING AND BUCKING.** (Top) Knee-deep in fresh fallen snow, cutter uses McCulloch chain saw to fell trees. (Below) At central bucking site, woodsman bucks logs with Homelite chain saw.

Meanwhile, downriver at Berlin, 5 cranes, crawler-deep in wood, create mountains of "food" for the voracious appetites of the 350-ton-a-day sulfite mill, 300-ton-a-day kraft mill and the 25 million bd. ft./yr. sawmills.

**SAWMILLING IS INTEGRATED . . .** One of the most interesting facets of Brown Co.'s operations is its integrated sawmilling program at Berlin. Here, sawlogs are unloaded by a Schield Bantam crane with tongs onto an infeed platform where they are fed singly and rotated in the new Soderhamn flail D3-N debarker.

This new type of debarker, which works well on hardwoods, is just starting to come into use in New England. Working on the chain flail-type principle, it does a good job of debarking.



**LINK-BELT CAR SPOTTER FOR UNIFORM LOADING** of chips into hopper type railcars is used at Brown. Installation is at discharge end of slab chipping operation where debarked slabs from sawmill at Berlin, N.H., are chipped for use in pulpmill. A Pulp & Paper Photo.

After debarking, logs are automatically ejected from the log carriage into a hot pond, retrieved by a Unit crane with clam-shell grapple and then move along a conveyor to the sawmill.

**HOW CHIPS ARE MADE . . .** Slabs and edgings from the sawmill move to a chain conveyor which feeds them into a 75 in. Soderhamn disc chipper. The chips are propelled from the chipper high enough to drop into gondola-type railroad cars for final delivery to a siding alongside the wood room.

Sawmill chips discharge through the bottom hoppers into a company-designed flight conveyor. Of interest is the Brown-contrived drag conveyor and leveler which evens any large slugs of chips before moving them to the Link-Belt Co. chip belt conveyor system, designed for moving up to 50 cords an hour. Waste wood chips delivered by dump trucks from nearby sawmills are also received at this flight conveyor.

The four section 36 in. Goodyear Rubber belt is over 300 ft. long and moves the chips to the Allis-Chalmers LoHed chip screens and drops accepted chips into a Link-Belt star feeder. This feeds an Airveyor system, powered by a Roots-Connerville pump with a Westinghouse motor, which pushes chips at the rate of 30 cords/hr. to a 100 ft. elevation to the 126 ft. long softwood chip bin or the 65 ft. long hardwood bin.

Chips from the bin discharge through a continuous series of counterbalanced hinged doors working in conjunction with a Link-Belt motor-operated rotary star feeder, feeding chips continuously and intermittently. Each line of feeders delivers to a separate 36 in. wide Link-Belt horizontal roller-bearing belt conveyor, operated at 400 fpm with a capacity of 15,240 cu. ft. of chips/hr. Troughing idlers are 45° to increase carrying capacity of conveyors.

Each of the two belt conveyors delivers on the floor below to a short reversing belt conveyor with a Merrick Weightometer on which each charge of chips is automatically weighed. The Weightometer belt discharges to a 36 in. inclined roller-bearing conveyor, approximately 240 ft. long, extending through the plant yard through an enclosed gallery conveyor from the Burgess sulfite mill to the kraft mill. There, chips are delivered at a right angle to a 36 in. wide horizontal belt 115 ft. long with a self-propelled manual steel tank type tripper for dischage into the proper digester.

**CHIP FROM FIVE SAWMILLS . . .** Coming closer to its goal of making

every fiber count, Brown Co. recently completed an agreement with Wilner Wood Products Co. of Norway, Me., whereby an estimated flow of 15,000 cords of white pine chips will move from five sawmills to Berlin annually.

"Slabs, edgings and sawdust piles should be a thing of the past in Northern New England when this program hits its peak," Mr. Fair said, and "will save many thousands of trees each year and will increase profitable lumber production in the area by allowing young trees to grow to size, providing a better yield in sawlogs later."

As a result of the studies of methods of using sawmill waste, two Carthage 39.5 in. disc chippers were installed at Berlin.

**HOW WILNER SOLVED ITS PROBLEM** . . . Back at the sawmills, Joseph R. Wilner, president of Wilner Wood Products Co., had been hard at work on problems of mounting piles of sawdust, slabs and edgings. His company operates two sawmills in Norway, Me. and produces wooden heels (wedgies); consuming some 12 million bd. ft./year of white pine. Mr. Milner says it was costing him between $1.50 to $2 per M ft. sawn to remove these waste piles. He frequently thought how wonderful it would be if someone would pay him, instead of the other way around.

Mr. Wilner invested in Soderhamn debarking and chipping equipment. One immediate advantage was that downtime for replacing and filing saws was reduced. After some months, the agreement was so satisfactory that he decided to install similar units at other mills and in addition at sawmills of other suppliers to his Norway plant.

Here's how it works at Norway. A Silent Hoist lift truck retrieves logs from storage to a powered chain brow feeding to the debarker infeed conveyor. After debarking, logs move to the outfeed conveyor.

Sawdust moves to a pulverizer and to two large Louisville rotary dryers for use in the wood flour operation. Bark-free slabs and edgings move from the board saw to the Soderhamn chipper, powered by a 200 hp motor with a capacity of 10 cords/hr.

Chips are blown to the top of a Link-Belt chip screen and acceptable chips are belt-conveyed to a spiral worm conveyor. This conveyor is arranged to load three open-type gondola cars simultaneously and will be expanded to load five.

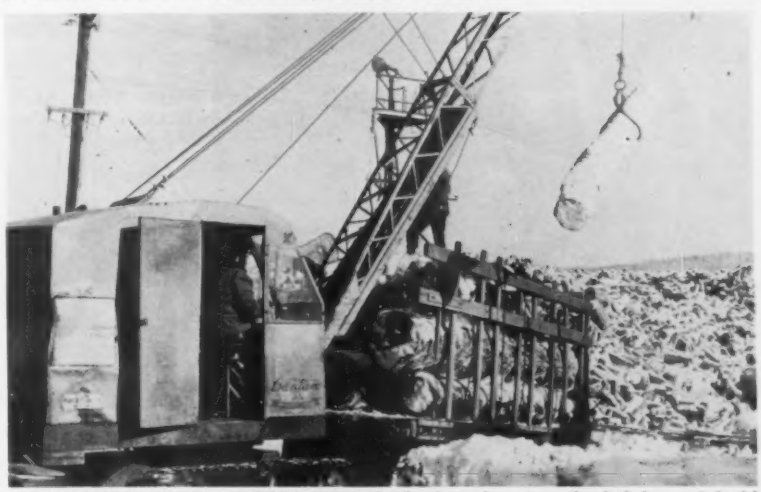
Daily production at Norway is about 3 carloads or 36 cords and when installations at other plants hit full stride, total production is expected to be 75 cords/day.



**BALDWIN-LIMA CRANE SWINGS HEFTY SLINGLOAD OF SOFTWOOD** from truck to mountain of wood awaiting spring "ice-out" time. Crane and trucks are standing on frozen lake surface. Pulpwood drive is still an integral part of integrated woods movement to Brown Co's. Berlin, N.H. mill.



**LINK-BELT SPEEDER JETTISONS SLING OF PULPWOOD** onto pile on brink of Androscoggin River. Cranes are important part of Brown Co.'s mechanization and at height of woods activities some 15 cranes will be used to get the timber out of the forests and into the mill's woodyard at Berlin, N.H.



**MEANWHILE BACK AT THE MILL** load of sawlogs is unloaded by a Schield Bantam crane. Brown Co. has a 25 million bd. ft. per year sawmill at Berlin. Sawlogs are routed from truck onto infeed platform to Soderhamn flail debarker. Sawmill slabs are chipped and routed to pulp mill. Brown Co. draws about one-third of its raw material fibers from sawmill wastes.



**UNIQUE BRACKET DESIGNED BY PULPWOOD DEALER** keeps load straight and level even when crossing deep ditches. Pallet's weight is equally distributed on trailer frame, wheels are counterbalanced.



**PALLET TRAILER INVENTED BY "CHAMP"** . . . It moves swiftly through woods, increased his production 10 cords a week, doesn't break seedlings.

***PULP & PAPER FIELD REPORT:***

# A Pulpwood "Champ" In Action

## Other producers thought Medford Raney was crazy to take on a 99% topping job—here's how he proved them wrong

● When Medford Raney agreed to take on a pulpwood job that was 99% topping behind the Fordyce, Ark., Lumber Co., his friendly competitors said he was crazy. He couldn't keep a crew together in that kind of a job, they said, and even if he could, he'd probably starve to death.

Mr. Raney not only took on the job, but has been at it for more than two years and has been doing such an outstanding job that he was one of the pulpwood "champions" spotlighted at recent APA Mobile talks (Pulp & Paper, June). Rex Carey, wood superintendent for IP's Camden, Ark., mill says he is one of the "best producers we have."



**THIS TWO MAN TEAM,** using McCulloch Super 33 which Raney thinks is the "most ideal for this operation," once cut 18 cords a day for five days in a row. Man in backround is marking tree top.

After the Mobile meeting, a PULP & PAPER editor drove to Arkansas for a good look at this producer who was voted a "champion."

He fits into the characteristics of a good producer the way a tree fits into its bark.

Still a youthful man, Med Raney has spent 20 years working around the woods, first as a superintendent for a big lumber operation, then as the operator of heavy lumber equipment. When a heart attack felled him, Mr. Raney had to give up heavy work. So he decided to tackle the job of ramroding a pulpwood operation. The best offer around was a straight topping job behind Fordyce Lumber.

**MECHANIZATION PLUS INNOVATION, EQUALS SUCCESS**—Med Raney would never have made it had it not been for the complete mechanization of his operation. But he carried this philosophy even farther than most pulpwood producers. He has developed equipment which actually is the difference between failure and making what he calls a "good living."

"I started out with just a truck," he told PULP & PAPER. "We were getting about 20 cords a week. Then I got a pallet, horses and a wagon and upped my production to 30 cords.

Then my tractor pushed it to 40 cords. Finally I had this pallet trailer built and added another 10 cords. We average 50 cords a week year around, now. In the summer we get up as high as 62 and we cut 102 cords in one week once. Machinery really tells the story. You can't be throwing money away sitting under a tree waiting for a horse to cool off—not with labor costs what they are today."

Equipment on Mr. Raney's operation includes a Chevrolet two-ton V-8 truck, an 850 series Ford tractor, a Ford tandem tractor, a Super 33 McCulloch power saw, which he says is "the most ideal saw we've found for the job we're doing," and a pallet frame on his truck. His sawyer, following a marker, once cut 18 cords a day for five days running with the Super 33.

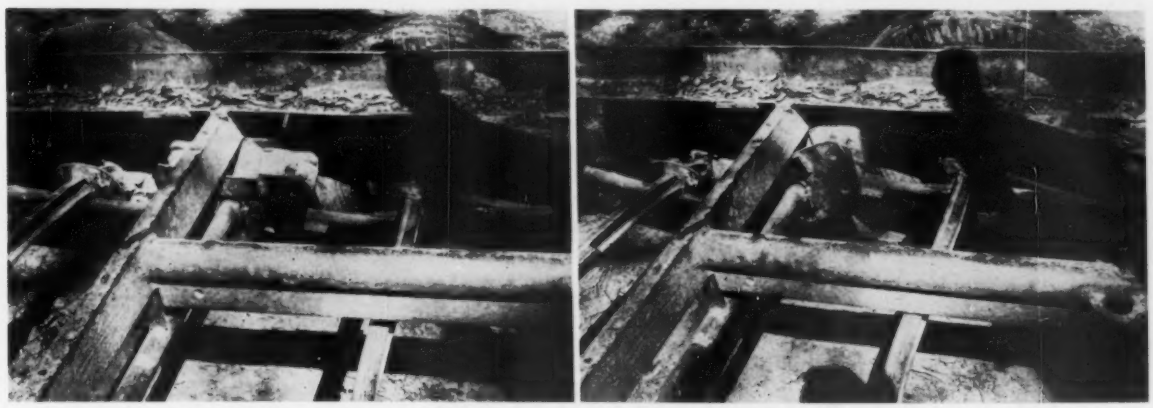
**CREW WORKS AS A TEAM**—Mr. Raney keeps close tab on his money, buys equipment only when he feels it is necessary to the operation, has kept his crew together by offering them steady security and regular paydays ("The boys are usually in hock to me a little by Friday afternoon") and by adding an extra 50 cents a load to what he pays his men when they are doing a particularly rough topping job. He supervises the woods job constantly, looking for better ways of doing things and ways to improve on his machinery. Three of his eight-man crew have been with him since he began operations more than two years ago, the others have been with him almost as long. The youngest man on the crew has been with him six months.



**IP'S REX CAREY,** left, and producer **MEDFORD RANEY** discuss topping operation which Mr. Raney admits would never have worked without a completely mechanized operation, teamwork and interest of crew.

Close supervision has paid off in spades for Medford Raney. Once he observed that his men were missing trees when they worked the woods in circles. Now he has them work in strips, starting from the front to the rear of the area. They haven't missed a cut since. For a while he suffered a plague of flat tires due to snagging. He lined his four-ply nylon tires with reliners and he hasn't had a flat since.

**PALLET TRAILER DOES JOB**—His most successful idea, however, was designing a pallet trailer which can be hauled easily through the woods and which will cross logs and 3-ft. ditches without turning over or dumping any wood. The trailer was built for $200 by a local mechanic after Mr. Raney spent six weeks working out the design. The first two he built did not work. One upset and the other locked wheels when it ran into a ditch. The successful trailer has wheels set in a half-moon bracket, 14 in. long and 8 in. high. The wheels can move up and down in such a way that the axle is under the entire load all the time. He thus distributes the entire load of six to eight tons equally on six different parts of the frame at the same time. The bracket swings as the wheels move up and down and keeps the center bar counterbalanced at all times. This trailer even runs with one wheel off. It has added 10 cords a week to the operation.



**CLOSEUPS OF TRAILER'S COUNTERBALANCE SYSTEM** are shown in these PULP & PAPER photos. Left, wheels in normal position. Right, when front wheel rises, drawbar in center remains on same position, keeps weight on pallet from shifting and tipping the trailer over.



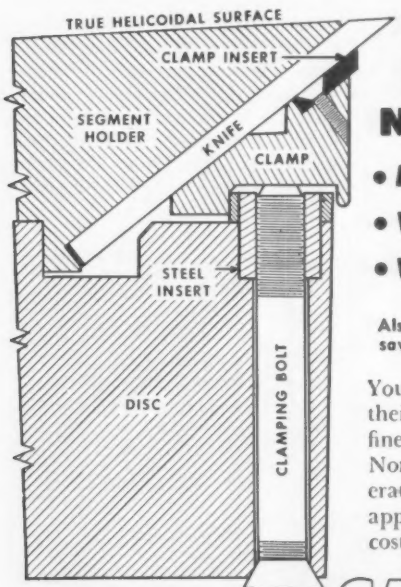
**WINCH AND HALF-SWINGING BOOM DO TRICK.** They enable three-man crew to hoist heavy log to top of loaded pallet with much less work than it formerly took four men. Left, worker attaches chain sling to log. Center, log is lifted by hoist. Right, two men position log on pallet.

He is now perfecting his latest innovation—a winch which operates a half-swinging boom mounted on an A-bar on the back of the Ford tandem. The boom is used to lift heavy sticks of wood into pallets. It permits three men to load a truck with less effort than four men did previously. Once he has all the bugs ironed out, Mr. Raney feels he may add another five or six cords a week to his production. And the set-up makes his men a lot happier.

"I'm the dreamer on this job," Mr. Raney told PULP & PAPER with a smile, "I guess that's about all I can do outside of riding herd on the job and running the business end of things. But I feel we're licking some of our big problems right here in this small operation and I'm going to keep on licking them as long as I can afford it."

Medford Raney now has $8,000 tied up in equipment but mechanization of his operation and careful adherence to good business practices has enabled him to do a job that others thought would never pay off. "If they ever give me a spotting job to do," he says, "I'll be in clover." More important, however, is the fact that Medford Raney is using ingenuity and common sense to lick some of the big problems facing the industry today. It could use more producers like him.


THIS SHOWS YOU WHY




the Knives in the Carthage Norman Chipper

- Last So Long
- Won't Come Loose
- Won't Change Position

Also note the inexpensive insert that saves wear on the more costly clamps.

You have to SEE the chips – see their quality – to appreciate the fine performance of the Carthage Norman Chipper. You have to operate this outstanding chipper to appreciate the low maintenance cost and long service life.

Write for Full Information

CARTHAGE MACHINE COMPANY
CARTHAGE, NEW YORK


## College Starts Research To Halt Forests Pests

A research project on testing insecticides for controlling various forest-damaging pests has been undertaken at Oregon State College. The results are expected to provide data to assist in effectively controlling, or preventing, insect outbreaks prior to developing into epidemic proportions.

Last year such infestations ranged over 7.7 million acres of Oregon and Washington timberlands, about 16% of the forest area in this region. Douglas fir bark beetle, No. 1 pest, accounted for nearly a third of this total. The other leading forest insect pests are spruce budworm, silver fir beetle, balsam woolly aphid and Western pine beetle.

Dr. Julius Rudinsky, who recently joined the college staff and previously carried on forest entomology work for Weyerhaeuser Timber Co., has charge of the project which is sponsored jointly by Northwest Forest Pest Action Committee, State Board of Forestry, and the school's department of entomology and forest experiment station.



# Gradall® unloads all rail-delivered wood for Westvaco's Covington Mill

This one Gradall unit easily and quickly unloads all pulpwood delivered by rail to the Covington, Virginia plant of West Virginia Pulp and Paper Company. Mounted on a self-propelled wagon, it features a blade for pushing logs from the delivering railroad cars into a flume alongside the track.

Gradall has more than ample capacity for handling the mill's monthly requirements of 36,000 cords. A similiar installation unloads 1,100 cords in an 8-hour shift.

In addition to securing more uniform production control, they have also eliminated an operator training problem—because Gradall's operation is so simple, positive and foolproof. No matter what your pulpwood handling problem requires —grapple or blade— Gradall is the cost-cutting answer. Why not arrange for a demonstration, today?

® Reg. U. S. Pat. Off.

Gradall DIVISION OF WARNER & SWASEY Cleveland PRECISION MACHINERY SINCE 1880

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Gradall Division—Dept. P-9
WARNER & SWASEY COMPANY
5701 Carnegie Avenue
Cleveland 3, Ohio

Please send me free literature on faster pulpwood handling by positive control grapple Gradall.

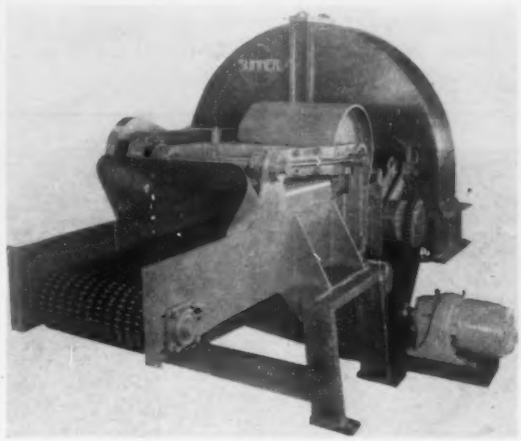
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# YOU WANTED THIS SUMNER CHIPPER



**Simple Horizontal Infeed Available with Bottom or Overhead Discharge**

●

Long sought by veneer men and chip users . . . a Veneer chipper that would convert veneer rejects into uniform chips with volume output. The first veneer chipper was a Sumner exclusive with its installation in 1939. Today Sumner's modern Vertical-cut Veneer Chippers have many new features, each overcoming a major chipping problem.

●

Write today for more details on this outstanding Veneer Chipper. Your inquiries regarding our wide range of chippers and other wood room machinery will receive our immediate attention.

Designers and Builders of Quality Machinery for the Forest Products Industries

SUMNER IRON WORKS
EVERETT, WASHINGTON

## Battles Budworm

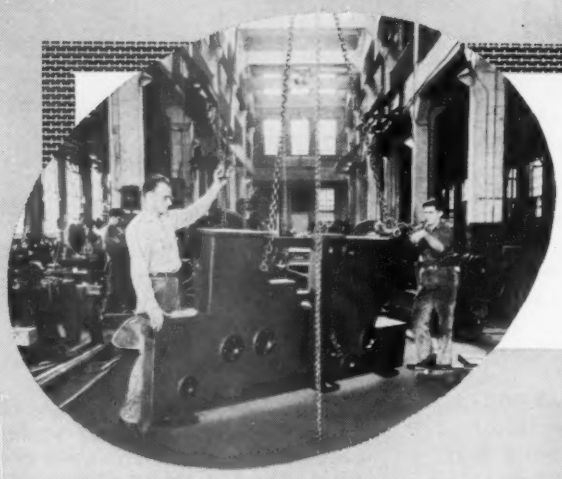
In the past two months 450,000 acres of Idaho national forest seriously infested with spruce budworm were aerially sprayed with DDT. This destructive defoliator became noticeable in this region four years ago. Last year similar control operations were employed on 990,000 acres in Boise and Payette national forests. Parts of these two forests, as well as Salmon and Challis national forests, were included in areas sprayed recently.

Contrary to the name, spruce budworm prefers Douglas fir and white fir to spruce, but is destructive to all three. Penn Salt manufactured the insecticide and Roberts Aircraft applied it at the rate of one pound per acre.

**Forest Types on Wisconsin Commercial Forestland**

| Forest Type | Area (acres) | Percent of total |
|---|---|---|
| Northern Pine | 1,250,000 | 8.2 |
| Spruce-Fir | 1,900,000 | 12.5 |
| Hardwoods | 6,150,000 | 40.5 |
| Aspen | 5,900,000 | 38.8 |
| Total all types | 15,200,000 | 100.0 |


"From ingot to fourdrinier wire"



HAIRSPRING ACCURACY — BRIDGE-BEAM SIZE

Our machine shop doesn't make hairsprings or bridge beams, but our maintenance and construction operations demand equal versatility from our men and machines. Hub of an integrated operation such as ours, its skilled personnel are ready to machine a part to a fraction of a thousandth of an inch, on a tiny instrument part or a huge loom frame.

Because our plant is *completely integrated*, every wire we ship has undergone thorough and continual analysis, control and testing from the raw metals to your finished fourdrinier wire ready for quality paper production.

We are proud to say they are *truly ours* — "from ingot to fourdrinier wire."

EASTWOOD-NEALLEY CORPORATION
Belleville, N. J.


## Pulpwood Personals

The spirit of Dixie is really going to reign at the annual convention of the Society of American Foresters when they meet in Memphis in October—the 2,000 expected foresters will take a river boat, Memphis Queen II, to a sand bar, disembark and eat fried catfish on a sandbar. And to top it off, the music will be supplied by the Beale Street Dixieland band . . . **E. L. DEMMON**, director of the Southeastern Forest Experiment Station at Asheville, N. C., received an honorary distinguished service award from Sec. of Agriculture **EZRA BENSON** in Washington for service as "an outstanding administrator" and for "furthering forest research and helping to shape national and regional forest policies" . . . University of Georgia lost its dean of the George Foster Peabody School of Forestry this month with the death of **DONALD J. WEDDELL**, who had been leader of the school since 1939 . . . **CHARLES SOULE**, of Escambia Treating Co., Pensacola, Fla., named chairman of the Florida Forest Industries Committee . . .

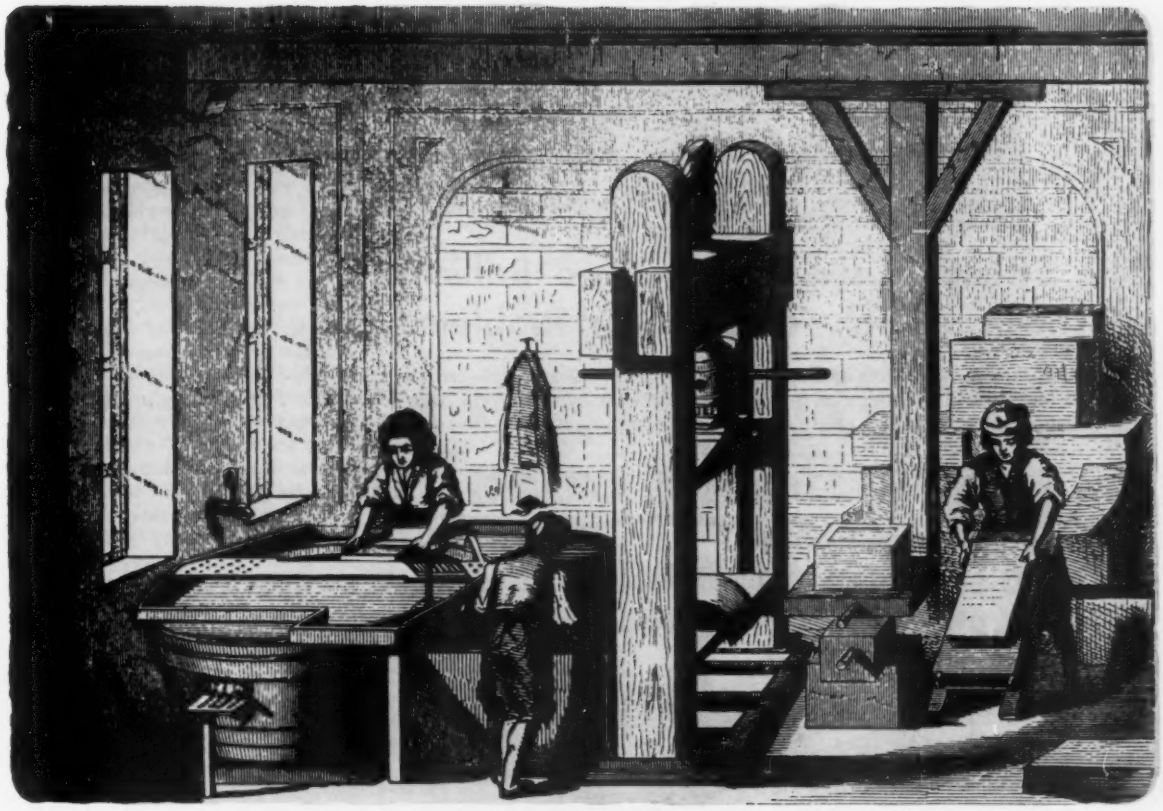
**T. ROBERT SHELDON**, who formerly headed the log and timber department for United States Plywood Corp., Seattle, has joined Scott Paper Co., Everett, Wash., as assistant to **HENRY DENNIS**, assistant vice president in charge of timber. **GEORGE HARTWELL**, personnel manager, timber division, also has been appointed an assistant to Mr. Dennis; he will continue to have responsibility for personnel, labor and safety activities in the timber division. . . . **R. N. HOSKINS**, industrial forester, Seaboard Airline Railroad, Norfolk, Va., has been appointed general forestry agent.

## New Chipper from France

One of the largest manufacturers of wood working machinery in France, Guilliet has developed a new, universal wood chipping machine said to be capable of producing uniform chips as thin as .01 in., cut along the grain to preserve the natural fiber lengths.

Developed for the Delbay nitric acid pulping process, Guilliet engineers have adapted it to other uses. It is said to be able to handle various forms of woods, such as round timber, small wood, split logs, slabs and sawmill residues. While being chipped, the wood is held fast by pneumatically controlled dogs.

The first unit in North America is being installed by Abitibi Power & Paper Co., Ltd., at its Sault Ste. Marie plant, according to the Council on Public Relations, Inc. who represent Guilliet in the U.S.



Papermaking in 1666

# Where will your sales be in 1966?

Will you be advertising to the right people? To get to the top and stay there, you must keep your name and products before the men who are in a position to buy them. Advertising in **Pulp & Paper** is the best way to do this if you want to sell to America's second-fastest growing industry—today or ten years from now. Here's why:

**Pulp & Paper** is paid for and read by more of your customers and prospects than any other business magazine serving the industry. Crisp, firsthand reporting by industry-wise editors*, combined with the finest and best-balanced circulation available anywhere**, reflect the soundness of **Pulp & Paper's** growth — closely in step with the industry's growth.

Proof that **Pulp & Paper** does a helpful selling job for its advertisers is shown by the business gains it has made during the past ten years. In 1955 **Pulp & Paper** carried 710 more advertising pages than in 1945. Its three nearest competitors carried 838 fewer pages.

Whether you sell hand tools, heavy machinery, chemicals or specialized services, the record proves that your advertising in **Pulp & Paper** helps your sales representatives keep on top of this soundly-growing industry. Write for detailed information describing this market and how to sell it.

*Through the continuing reader research reports of the Eastman Research Organization, Pulp & Paper readership is continuously compared in every detail with that of a wide variety of leading business publications serving that organization. This is the only reliable yardstick ever developed for measuring reader effectiveness. Pulp & Paper has this service exclusively in the pulp and paper field.

**Write us about this and refer to Pulp & Paper's advertising in Standard Rate & Data.

**PULP & PAPER**

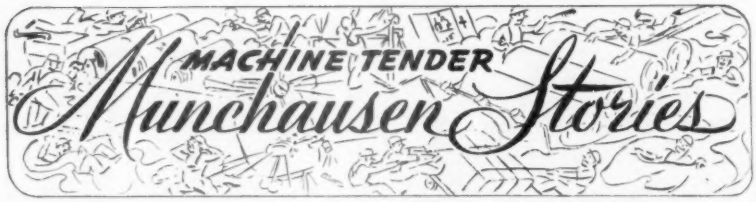
ABC ABP

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PACIFIC FISHERMAN · PACIFIC WORK BOAT · CLEANING & LAUNDRY AGE · WESTERN CANNER & PACKER · CONSTRUCTION WORLD




# The Strange Case of How Two Brilliant Biochemists "Solved" a Liquor Problem

*This Machinetender Munchausen story is a strange tale of how a couple of biochemists with a new plan for disposing of waste liquor, really stirred things up for the Spruce, North American & Forest Union Paper Co.*

*F. P. Hughes of Espanola, Ont., Canada, contributed this story.*

When, to cap all normal troubles of the Spruce, North American & Forest Union Paper Co., the State laid down a law ordering them to cease and desist from polluting the Hootchikootchiwishiwashi River with sulfite waste liquor, the mill manager acted with great swiftness.

First, he sent out a grader and dragline to make a few settling ponds to allow the spent liquor to stagnate and lose its polluting properties. Then he sent out the bull gang to repair the town sewer line which the dragline had inadvertently broken. Then he sent the ambulance to collect the grader driver and most of the bull gang for hornet sting treatment after the grader had upturned a hornet's nest. Lastly he sent the company tug to retrieve the grader from the river.

Meanwhile, the main office had hired a couple of biochemists (the summer sales being on, they were quite cheap), and sent them by the next train to the mill. They arrived overflowing with ideas and demonstrated conclusively (on paper) how the spent liquor was to be turned into alcohol for motor fuel at enormous profit. They started laboratory work right away, explaining that the first step was to find a breed of bug which would feed on sulfite liquor and produce alcohol from it.

One of their earlier experiments, which they confessed a failure, they discarded by throwing down a sulfite mill sewer. So by labyrinthine passages it worked its way down to the new settling beds. There, invigorated by the change of air, or perhaps by sunlight, it started to work very efficiently indeed. . . .

At first, only a slight change for the better in the odor could be detected. At the end of the week the alteration was more pronounced, and families could be seen walking down to the dikes to take the air.

The overflow from the ponds ran into the river, and from river to lake. During that hot summer, the sun, as it always does, evaporated the lake and transferred the liquid to the uplands. As the old song has it:

The steam rises over the mountain,
Comes down and condenses as rain . . .

only instead of rain, this enormous still was dropping over 40 proof alcohol from the clouds.

After a couple of months, the headwaters of the Hootchikootchiwishiwashi were full of the finest spirit; in the settling tanks thousands of tons of waste liquor were fermenting; daily the sun evaporated the alcohol con-

**Change blades in 30 seconds ...sharpen in 5 minutes**

**Right on the job!**

**only possible with the new, improved**



**WRIGHT POWER SAW**

**There is only *ONE* WRIGHT SAW.**

**EFFICIENCY-PLUS**—The Wright Power Saw has been completely redesigned with the individual pulp-wood cutter in mind. Changes blades as easily as your razor, sharpen 'em in 5 minutes—*on the job!* Everything about this great new tool makes for less work, greater production, at lowest possible maintenance cost. Works on "handsaw" principle with *reciprocating straight-blade*. Fewest possible moving parts mean long, trouble-free operation.

**SAFETY-PLUS**—You can't buy a safer power saw at any price. Won't grab or kick. Practically vibrationless, lightweight... reduces operator fatigue —a major cause of accidents. No chain to "throw"—*only* the cutting area of blade exposed.

**VERSATILITY-PLUS**—Fells, limbs, bucks, underbucks, even strips bark. Does everything a hand-saw, ordinary power saw and axe can do—faster and better.

**WRIGHT POWER SAW AND TOOL CORPORATION**
SUBSIDIARY OF THOMAS INDUSTRIES INC.
Executive Offices: 410 S. Third St., Louisville 2, Ky.
Plants at Ft. Atkinson and Sheboygan, Wis.; Princeton, Ky.; Los Angeles, Cal.



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Please send complete information and prices on the Wright Saw and where I can buy it in my area.

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tent of the lake, and nightly rain and dew deposited the alcohol over the mountain range.

Strange things began to happen; old Dick the hermit, who lived far upstream and who normally came into town once a year to cash his old war pension and buy supplies, woke Main Street up with his musket one night, and roared at the top of his voice "Let the rebel dogs come! Let them try to . . ." But the police took his powderhorn and ramrod away and put him in a cell.

Then a minister took his visiting superior upstream in a skiff for a little fishing; they returned in the merriest good humor, telling tales of an enormous sturgeon which challenged them to a bout of fisticuffs.

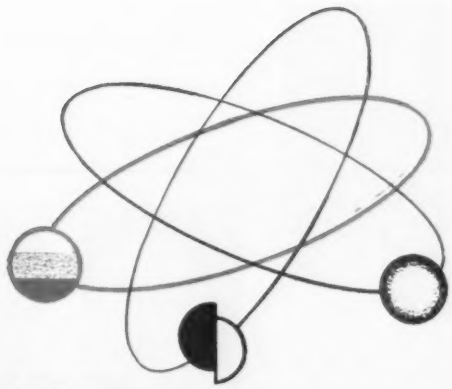
Indeed, the fish were the first to be affected. Belligerent carp, fighting drunk, would leap out of the water and attack fishermen. The animals which drink from the streams became affected. I well remember seeing a lachrymose old bull moose telling a young heifer moose that his wife didn't understand him, and the hangover he had next morning was piteous to see.

In fact, the animals became so incautious while under the influence that they would have been decimated during hunting season, were it not for the fact that the hunters were in worse condition after they had canoed up river. Though the expenditure of ammunition was enormous, the returns were small.

Fortunately with approach of winter the alcohol-producing bugs became torpid with the cold, and soon ceased work altogether, and when the first film of ice formed over the ponds, they expired from lack of air.

But that fall I entered the mill manager's office to discuss No. 1 calender stack, which had fallen to pieces during the night shift, to find him sobbing uncontrollably. The state was suing the S.N.A.F.U. Co. for some millions of dollars and a peculiar reason, viz., that the company ". . . did pollute the headwaters and main stream of the Hootchikootchiwishiwashi with alcohol thereby rendering it unfit for human consumption."

*If you have a Machinetender Munchausen story, send it to Machinetender Munchausen, PULP & PAPER, 1791 Howard St., Chicago 26, Ill. Just so it is about the pulp and paper industry, do not fear that your facts will be too closely checked. After all, Machinetender Munchausen always believes you have to let yourself go a little to tell a good story.*

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# PICTURES OF PEOPLE IN THE NEWS





### New Posts for Black-Clawson

ROBERT F. VOKES (left), Vice Pres. and Gen. Mgr. of Dilts Div. in Fulton, N.Y., has been appointed to new post of Administrative Vice President with location in New York offices under Frank T. Peterson, Exec. Vice. Pres., according to announcement by Karl F. Landegger, Chairman of the Board. Mr. Vokes is a native of Auburn, N.Y., a graduate of N.Y. State College of Forestry, Syracuse Univ., joined Dilts Div. of Black-Clawson in 1940 as director of research and development laboratory.

W. B. GORSUCH (right), Controller, is also moving his headquarters to New York, from Hamilton, O., as part of B-C's consolidation of executive functions. Mr. Gorsuch joined Black-Clawson in 1946 as Asst. Controller and Asst. Secy.





**CHILLICOTHE PROMOTIONS.** KON MATCHUK (left) has been promoted to Superintendent and WILLIAM TAYLOR (right) to Assistant Superintendent of Chillicothe Paper Co., Chillicothe, O., announces Pres. Austen P. Story. Chillicothe is a wholly-owned subsidiary of The Mead Corp. and is now expending $7 million on expansion.





### Changes at Crown Z

CLARENCE W. RICHEN (left), Chief Forester since 1946, becomes Administrative Assistant to the Vice Pres. for Northwest Timber Operations of CZ. He is a native of Oregon and graduate of Oregon State College.

GEORGE H. SCHROEDER (right), Chief Forester for past 10 years, succeeds Mr. Richen as CZ Chief Forester. Mr. Schroeder also is an Oregon State graduate.





### In New Posts in Midwest

MEL F. KNACK (left) has resigned as Mill Mgr. of River Raisin Paper Co., Monroe, Mich., to become associated with Lockport Felt Co., Newfane, N.Y. Mr. Knack had been with River Raisin 21 years, as Chief Chemist, Mill Supt., Plant Engr. and Mill Mgr. He is succeeded by JOHN FUKO, who has been with the company 9 years, recently as Mgr. of Quality Control.

ELMER K. STILBERT (right) has been promoted to Staff Mgr. of Coating Materials for Dow Chemical Co's Plastics Dept. Mr. Stilbert previously was Asst. Mgr. of Coatings Technical Service. He started with Dow in 1940 as a research chemist, and for many years has worked on use of coatings in paper and other fields.





**PROMOTIONS AT DRYDEN MILL . . .** HENRY ALLEN (left), Chemist in Control Department, Dryden Paper Co.'s mill at Dryden, Ont., has been appointed Laboratory Supervisor, and PER BERG-JOHANNESEN (right), Chemical Engineer in the Control Department, has been promoted to Asst. Pulp Mill Supt. Announcement was made by Mill Mgr. D. H. MAUNSELL. The appointments are in line with the policy of completing staff organization before the bleach plant goes into production. ART TEW is Pulp Mill Supt. and KEN SHERIDAN Assistant Supt., responsible to Mr. Tew for operation of woodroom and pulp mill with exception of the bleach plant. W. E. HAVILAND is Control Supt., assisting in the work of General Mill Supt. during NORMAN HOWE'S absence on sick leave. Mr. Berg-Johannesen is a Norwegian, but all his experience in the industry has been in Canada. Both he and Mr. Allen are graduates of the University of Toronto.



### Strengthens Impco on West Coast

NORMAN (BILL) MORIN (left), has moved to Tacoma, Wash., to be Process and Service Engineer for Improved Machinery Inc., serving with WILLARD OSBORNE (right), also of Tacoma, who is Impco's Sales Rep. in the West. Mr. Morin was born in Nashua, N.H., where his father, Joe Morin, is in charge of shipping and one of Impco's oldest employes. Mr. Osborne was born in Amityville, Long Island, and has been in the West for 5 years. He was formerly with International Paper Co. Picture by PULP & PAPER.





### Son Joins Father

MURRAY H. BENNETT, JR., (left), a '56 b.s. grad in mechanical engineering, Tri-State College, Angola, Ind., has jumped in with both feet into company founded by his Father, MURRAY H. BENNETT, SR., (right), Chairman, Chemical Linings, Inc. Young Mr. Murray is now on a Chemical Linings' job at Weyerhaeuser Timber Co., Cosmopolis, Wash., where they are doing all the tile linings and much of the brick linings.



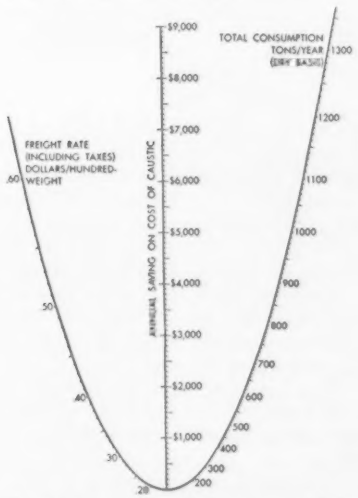
**MOVE UP AT CZ CAMAS MILL . . .** (l to r) **W. E. PARKINSON** becomes General Supt. of Wood Mill, Finishing & Services, **R. W. NORDSTROM** joins Production Planning Dept. as Assistant Supervisor, **MAX BROWER** advances to Project Engineer.

# BRIEFS
## for caustic soda buyers

# 50% or 73%?
# Choosing a supplier
# New producing point

### 50% to 73%— some save, some don't

To estimate quickly whether you can save by switching from 50% to 73% liquid caustic soda, simply draw a line on this nomograph.




Start at your freight rate and draw to your annual consumption in tons, dry basis. Your approximate savings on freight will appear where you intersect the center line.

From this figure, subtract annual depreciation for dilution equipment. (We'll be glad to advise you on cost of this equipment.)

If you still show a saving, it would be wise to consider the big switch seriously.

For more facts on the economics of 50% and 73% caustic, check the coupon for a copy of our pocket-size *Caustic Soda Buyer's Guide.*

And for specific technical advice centered on *your* requirements, just phone or write the nearest Hooker sales office.

### Choosing a supplier

Service is a large part of what you pay for when you buy caustic soda.

Here are some important "service" points to look for when you're considering a source of supply. (As a Hooker customer, you enjoy *all* of them.)

**1. Supply security.** How flexible are your supply lines? For instance, a supplier with plants and stock points on deep water may be able to offer you a choice of rail or water delivery. This can assure you steady supply in case of rail service interruption.

**2. Realistic contracting.** Your agreements with your supplier should realistically reflect your expected needs *and* the supplier's ability to consistently deliver the tonnage you need. Best yardstick for measuring this ability is a supplier's performance record. Hooker, for example, has an unbroken 50-year record of fulfilling contract commitments.

**3. Engineering help.** A supplier's engineering staff can help you set up a new caustic handling system—or revamp an old one—with advice, and with actual design assistance.

**4. Safety programs.** The men in your plant who handle caustic soda can benefit from safety suggestions offered by your supplier. You should have on tap the latest in safety equipment, plus up-to-date information on the safe handling of caustic soda.

We'd be happy to enlarge on these points, with your caustic requirements in mind. A phone call or note to the nearest Hooker sales office will bring you the specifics.

### New source

Put a pin just north of Vancouver, B.C., on your map of caustic soda supply points.

Here in the city of North Vancouver, early in 1957, a new $11 million chlor-alkali plant will go on stream. At the plant's masthead will fly the colors of Hooker Chemicals, Ltd. The plant will be built and operated by Canadians, for industry in Canada.

The new Hooker plant will be Western Canada's first domestic source of caustic soda and chlorine. It will shorten supply lines, provide small but real freight savings, eliminate the need to pay duties on caustic and chlorine, and make for faster service.

If your company is already operating plants in British Columbia, or plans to build in this great, growing territory, this is a good time to discover how Hooker Chemicals, Ltd., can serve you.

**Check items** you'd like to receive:

☐ *Caustic Soda Buyer's Guide.* Lists advantages of 50% and 73% solutions; comparative costs; capacities of tank cars and other containers; useful shipping information.

☐ Technical data on caustic soda.

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**AT LUKE, MD., MILL, PNEOLATOR IS ALWAYS HANDY.** R. C. ROSS (left), Safety Inspector, and V. E. KALBAUGH (right), Fire Marshall, at West Virginia Pulp and Paper Co.'s bleached kraft pulp and book and paper mill, look over an M-S-A Pneolator, always available in cases of arrested breathing.




**AWARDS FOR SAFETY AT MARYLAND KRAFT MILL.** Safety Director JOHN J. LONG (right), of the West Virginia Pulp and Paper Co. mill at Luke, Md., presents award pins for no-injury safety records. Recipients (left to right) are LOUIS HICKS, 40 years of safety; ROBERT MOOREHEAD, 30 years, and JAMES JONES, 30 years.

# How Maryland Mill Keeps Operation Safe

**By GEORGE L. SETH***

● Hazards of machinery, chemicals and noise combine to place the pulp and paper industry in the "high-hazard" safety group, with an accident frequency rate of 11.9, although even this rating is a big improvement over the 1946-48 record of 18.56.

Every safety engineer in the industry is familiar with most of the safety problems which cause this high frequency rate, but some new answers to these problems are not so well known.

For example, one of the most troublesome problems in the industry is noise, which is a safety hazard because it interferes with communications and also may cause audio-trauma, or damage to the sensitive inner ear. The American Standards Association reports that industrial noise has resulted in claims against industries in general of more than $2 billion.

Until recently, without four complicated and costly instruments, it was impossible to detect the source of the damaging noise, since the loudest noises do not necessarily cause the most damage. The frequency of sound is a vital factor in audio-trauma.

**FOUR COMBINED IN ONE . . .** A new instrument, the Soundscope, produced by Mine Safety Appliances Co., Pittsburgh, combines the four instruments formerly used into a single, portable unit which serves both as a meter to measure overall sound levels and as an analyzer, measuring sound in each of eight octave bands to determine noise peaks.

With the M-S-A Soundscope, it is possible to make noise contour maps of plants, to determine unsafe areas. Then, harmful noise can be eliminated by redesigning machinery or by noise insulation. Also, employes can be protected by the use of ear protectors, such as the M-S-A Noisefoe, or M-S-A Ear Defender.

**HAZARDS WITH CHEMICALS . . .** Safety engineers should recognize the hazards that exist where chemicals are used in great quantities, as in the pulp and paper industry. Here, there is always the possibility of damage from toxic gases and dusts, injury from corrosive acids, and injury from explosions. To determine if there is any atmospheric contamination, there are instruments such as the M-S-A Sulphur Dioxide Detector and the Hydrogen Sulfide Detector.

Although hydrogen sulfide has a distinct odor, this is not a dependable warning of danger, since 2 to 15 minutes exposure to concentrations as low as .01% may produce impairment or temporary loss of the sense of smell.

Colorless, suffocating, sulfur dioxide is a toxic gas to be reckoned with wherever sulfuric acid, sulfur or its by-products are present.

Both detectors provide simple, practical means of "on the spot" measuring and testing of the atmosphere of a plant.

Safeguards against toxic gases and splashing chemicals include full facepiece gas masks, respirators, goggles, protective acid-proof clothing, hats and shoes.

The hazards of bleaching today involve the handling of liquid chlorine. This chemical should be stored in an unoccupied, well-ventilated room far enough away from operations so that any leakage will not affect workers. Chlorine gas masks or self contained breathing apparatus should be available outside the room for emergency use. Preparation of the bleaching mixture should be in a room apart from the general workroom, and all personnel working on this should be equipped with chlorine masks and trained in the elements of artificial respiration. Oxygen equipment should be readily available.

**IN RECOVERY PROCESSES . . .** Since economic success in the manu-

* (Editor's Note: Mr. Seth retired recently after 33 years of service with Mine Safety Appliances Co., Pittsburgh. At the time of his retirement, he was a product line manager in the Sales Planning Dept. Mr. Seth served in the Chemical Warfare Service in both World Wars. He is past president of the Pittsburgh Chapter of the Armed Forces Chemical Assn. Mr. and Mrs. Seth will live at Fort Lauderdale, Fla.)

facture of pulp by the sulfate and soda processes depends, to a large extent, on the ability of the mill to recover for reuse the chemicals used in the digesting process, additional hazards must be faced. In saving these chemicals by removing impurities picked-up in digesting, a burning process is used. To safeguard workers, there must be good stack ventilation above the furnace. In addition, workers should wear dark goggles to protect their eyes from the rays of the molten alkali which is drained from the furnace.

### Closure May Be Averted for Rayonier Mill at Shelton

President Clyde Morgan of Rayonier Inc. states that he is optimistic over prospects that Rayonier can satisfy Washington state authorities of the success of effluent disposal at Shelton, Wash., and avert closure of the Shelton sulfite pulp mill.

The State of Washington pollution control commission recently said that the company was causing undue pollution of the waters in the Shelton area, and refused to issue a permit to discharge mill waste into Oakland Bay, a saltwater body and arm of Puget Sound.

Rayonier expects to show a highly satisfactory disposal job is being done at a hearing. For a decade now, Rayonier has disposed of 97% of its sulfite waste liquor through its near-million dollar disposal system, operated at a considerable expense, considering there is no economic return on the investment. The cooking liquor from the digesters is evaporated and the solids burned in the disposal process; 3% of the liquor is carried off with the fibers and eventually discharges in the various stages of washing and bleaching.

Rayonier states that it learned the commission's action was the result, in part, of accusations made by growers of Olympia oysters. The company is sponsoring a study of the oyster problem by the Academy of Natural Science, Philadelphia.

### Promoted At Brown



JOHN HEGEMAN has been promoted to Prod. Mgr. of kraft and sulfite mills of Brown Co., Berlin, N H. He has been Asst. Mgr. of the pulp mills; first joined Brown in 1946 as a Chem. Engr. in Research.


When this car was no. 1 this CRANE handled its first load!



*This was it in 1928 . . . the Ford Model "A"

Twenty-eight years of constant use . . and still going strong! Keokuk Electro-Metals Co., Keokuk, Iowa, purchased their Whiting Overhead Traveling Crane back in 1928, and it's been working every shift since. Just recently, Keokuk decided to install a new trolley assembly, the first major replacement on their crane in all these years.

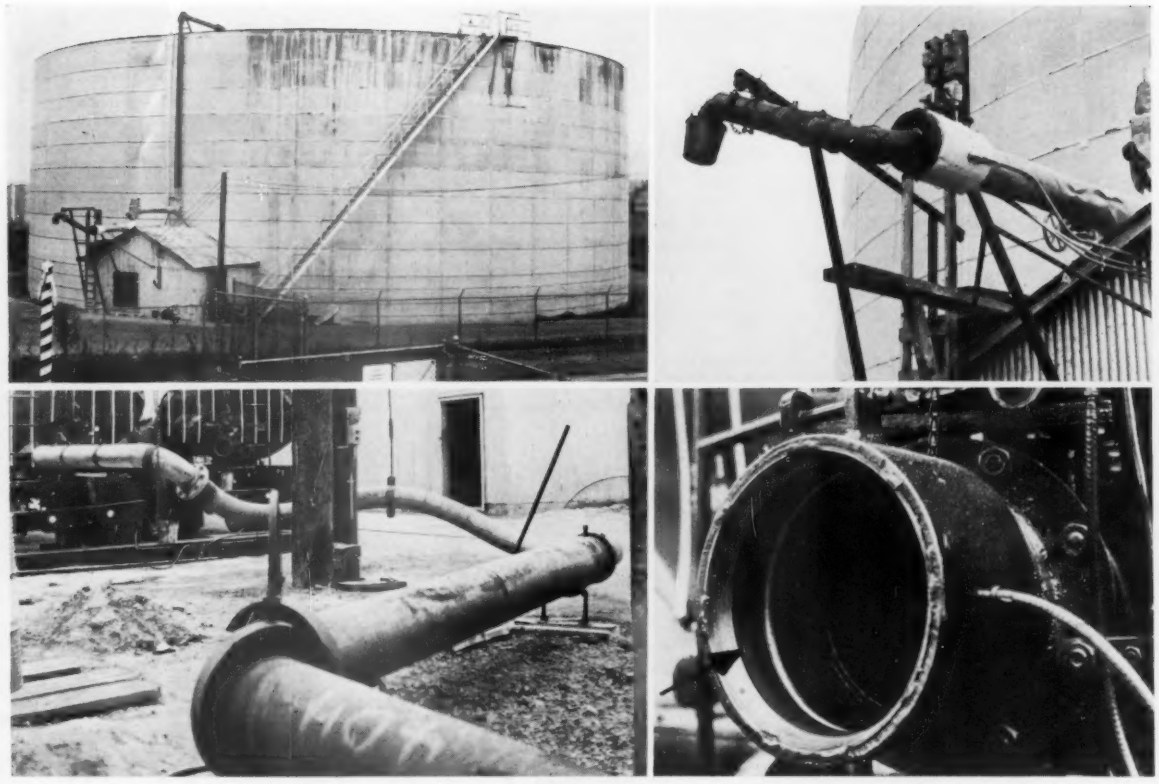
Other Whiting Cranes, engineered-to-the-job, are at work right now in the pulp and paper industry, establishing similar records of trouble-free operation. Cost-conscious mills depend on them for steady, efficient handling of paper, from machines to storage and storage to cars. Get more for your money — long life, low maintenance — with a Whiting Crane! Ask for complete information now on the type of crane you require. *WHITING CORPORATION, 15632 Lathrop Avenue, Harvey, Illinois*

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**LONGVIEW FIBRE CO. CONVERTS TO 1500 SSF VISCOSITY FUEL OIL** for firing boilers and lime kilns at Longview, Wash., plant. (Upper left) Fiberglas insulated 80,000-bbl. tank at port dock receives fuel directly from tank ships. (Upper right) Loading pipe, traced with electric heating cable, for transferring heavy fuel to insulated semi-trailers hauling between dock and plant tanks. (Lower left) Unloading fuel oil at plant from one of two semi-trailers. (Lower right) Hycar rubber sleeve in 8-in. trailer discharge forms seal with unloading pipe when inflated.

# Changes to Heavy Fuel for Boilers and Kilns

● Longview Fibre Co. recently converted from standard bunker fuel oil to 1500 SSF viscosity oil for firing boilers and lime kilns. Consumption runs around 1,000 barrels in the daily production of 900 tons of paper and paperboard products at this Longview, Wash. kraft mill.

When it became apparent heavy fuel oil would become available for use in place of the standard 175 SSF viscosity bunker fuel used at the mill since 1949, an investigation was started to ascertain the suitability of using high viscosity fuel oil.

After determining the feasibility of burning heavy fuel in existing equipment, the problem of transport was investigated. This involved ascertaining suitable means for getting the heavy oil from tank ship to points of consumption via existing storage facilities—which include an 80,000 bbl. marine dock storage tank and 10,000 bbl. plant site storage; the two a couple of miles apart.

Engineering consideration was given to between-tank transport by (1) rail tank car (as in the past for lighter oil), (2) pumping through 11,000-ft. steam-traced pipeline, (3) through untraced pipeline, (4) trucking in insulated 120 bbl. semi-trailers, and (5) building a plant site dock and pumping directly from tanker to a new 80,000 bbl. plant storage tank. Transport by truck and semi-trailer was considered most feasible.

**NEW FUEL IS SUCCESSFUL . .** Since conversion from regular to heavy fuel, the 1500-viscosity oil has been used continuously without encountering difficulties, according to E. M. Read, Jr., engineer on this project.

The tanker pumps the high viscosity oil at 160° F. to 80,000 bbl. tank storage 1,400 ft. from ship side through parallel underground 10 and 12-in. lines, unloading a normal 30,000 bbl. shipment in about 12 hours. Following unloading of the 1500-weight oil each line is separately purged with 175 SSF oil, which step is a "must" because of the heavy fuel's high (60° F.) pour point. Subsequently about 1,200 bbl. of the standard bunker fuel is pumped through the lines to rail tank cars for use in Longfibre's locomotives and kraft recovery furnaces.

Sides of the large dock storage tank are insulated with 3½-in. thick Fiberglas covered with ¼-in. Asbestocite sheets and secured with stainless steel studs and bands. Two-inch Fiberglas overlaid with 3-ply built-up roofing covers the tank top.

The minimum permissible oil temperature in this large tank is 130° F. When this temperature is reached, a spare steam locomotive pulls onto a spur near the tank and provides 3000 lb./hr. of 150 lb. steam to a Whitlock heat exchanger at the tank. A 100 hp, 400 gpm Worthington 6GR pump pumps 130° F. oil through the heat exchangers where it is heated to 160° F., then back into the tank on the far side. It takes about 4 days to heat the tank contents from 130° to 160°. This operation may be required 4 or 5 times a year.

The same pump which circulates

the oil also loads the 120 bbl. semi-trailer transports, taking about 15 min. per filling.

In the 9-min., 2.8-mile haul to the plant, temperature of the oil drops around four degrees. The truck driver backs the semi into position at the unloading station, leaves it there and departs in the second truck-trailer unit on another load cycle. These two trucks operate on a 40-min. turn-around.

**OPERATIONS AT THE MILL . . .** A man with other duties in the area unloads the oil. This involves an unusual device for connecting the 8-in. trailer dump valve to an 8-in. aluminum unloading pipe. This pipe, with an 8-in. flexible hose to which it connects, is pushed into position with the end inside an unloading sleeve. A Hycar rubber internal sleeve is then inflated with air to 15 psi, to make a tight seal, and the cylinder-operated dump valve opened. The released oil flows into the suction of a 400 gpm DeLaval IMO pump and discharged through a 200 ft. long 8-in. Gilsulate insulated, steamtraced, underground line into the 10,000 bbl. tank.

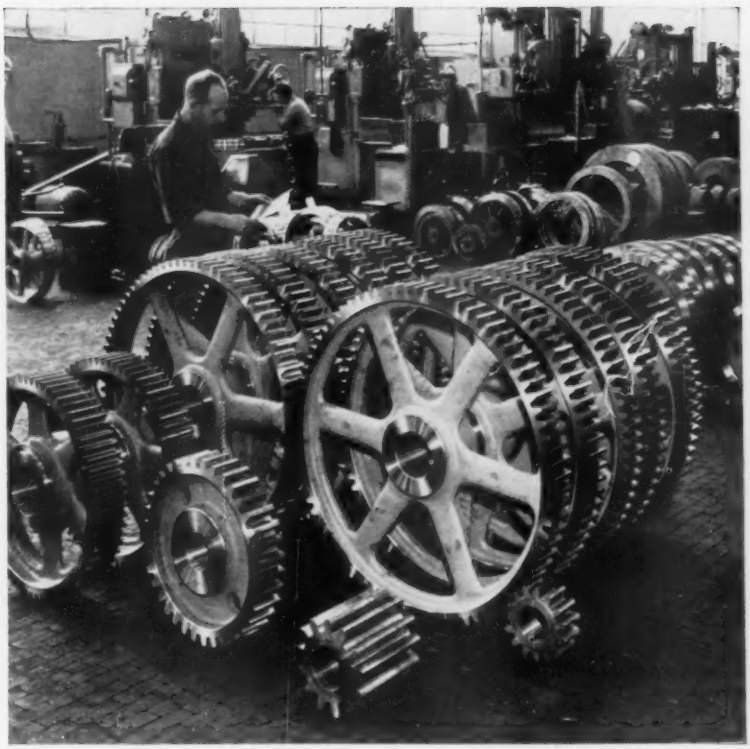
Tests show that the minimum oil temperature at which this 1500-viscosity fuel will dump satisfactorily is 120° F., although it can still be handled at 110° at 90% capacity.

Oil temperature in the 10,000 bbl. tank is maintained at about 180° by control of recirculation from various usage points. It is removed at this temperature by three DeLaval IMO pumps, through two C. F. Braun heaters increasing temperature to 260°, for delivery to various steam atomizing burners. For burning in Coen mechanical atomizing burners in lime kilns, the 260° oil is further heated another 20° by small heaters at the kilns.

Plant lines carrying the 1500 SSF oil are traced with 20-lb. steam and covered with one-inch 85% Mg insulation. At the 80,000 bbl. tank, which has no steam supply, the piping is traced with silicone-covered electric heating cable.

**ANALYSIS OF HIGH VISCOSITY OIL . . .** Typical analysis of the 1500 SSF viscosity fuel oil at Longview Fibre Co.:

| | |
|---|---|
| Flash Point, P-M, °F. | 204 |
| Viscosity @ 122°F., SSF | 1474 |
| Sediment and Water, % | .10 |
| Sulfur, % | 1.55 |
| Btu/Bbl., Gross | 6,544,000 |
| Gravity, °API @ 60°F. | 4.0 |
| Specific Gravity, 60/60°F. | 1.0443 |
| Pounds per gallon | 8.697 |
| Pounds per Bbl. | 365.5274 |
| Specific Heat | .4185 = 153 Btu/bbl. |

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**"POLYESTERS AND THEIR APPLICATIONS"**—by Bjorksten, Tovey, Harker and Henning. This is called the first comprehensive survey of the entire polyester field from raw materials to fabricated products. The text and annotated bibliography of over 3300 references cover most phases of production and use of polyesters. This has been painstakingly assembled over many years by Bjorksen Research Laboratories. Price $10.00. Reinhold Publishing Corp., 430 Park Ave, New York 22, N.Y.

**IMPROVED $ClO_2$ PROCESS . . .** An improvement in the process for generation of chlorine dioxide for pulp bleaching which may mean mill savings of $6,000 to $8,000 a year per ton/day of gas produced has been developed by Olin Mathieson Chemical Corp.

Under present practice chlorine dioxide is generated at the mill site by reduction of sodium chlorate with sulphur dioxide or methanol in an acid medium. The Olin Mathieson improvement involves the simple step of introducing sodium chloride (common salt) into the reaction mixture in the ratio of 0.06-0.08 lbs. per lb. of sodium chlorate.

This procedure results in almost quantitative reduction of sodium chlorate to chlorine dioxide, compared with yields of about 90% presently obtained. It also produces chlorine dioxide of improved quality in that the free chlorine in the gas stream is usually less than 1.5% compared with 2 to 5% currently common.

The development is the subject of a patent application naming W. W. Northgraves and B. H. Nicolaisen of Olin Mathieson as inventors. According to Mr. Northgraves, existing $ClO_2$ generator installations can easily be adapted at nominal cost to the addition of sodium chloride by adding a salt make-up tank and making necessary piping changes.

**POLYVINYL RESIN PLANT . . .** Production capacity of polyvinyl acetate polymers has been doubled at National Starch Products Inc. new Meredosia, Ill., plant. R. W. Merritt, vice president in charge of production, said this expansion is to meet the growing demand from paper and other industries for their various types of polyvinyl resins. Polyvinyl acetate emulsions, and adhesives compounded from these resins are produced at this plant as well as National's plant in Plainfield, N. J.

**POLYVINYL ACETATE IN SOUTH . . .** A new polymerization plant with initial annual production of 10,000,000 lbs. of polyvinyl acetate has been opened at Demopolis, Ala., by the Polyco-Monomer Dept. of Borden Co.'s Chemical Division. Augustine R. Marusi, president of the division, said it will be the first such operation in the Deep South. It was decided to establish the plant because of growth of paper and other industries in the area. Bordon will provide tank car, tank truck and drum shipments from Demopolis throughout the Southeast and Southwest.

**POLYETHYLENE FOR CANADA . . .** Canada Colors and Chemicals, Ltd., Toronto and Montreal, has beeen appointed distributor for A-C Polyethylene in Ontario, Quebec and Maritime Provinces by Allied Chemical International Corp.





THEN it's time to investigate SENTRY®—the first high speed, continuous moisture detector to utilize the dielectric property of paper in an entirely new electronic circuit—a circuit which produces a signal of greatly increased stability regardless of grade of paper. Used singly or in conjunction with an integrated control system, SENTRY provides the "missing link" in your quality control program. Full width scanning, of course. Write TODAY for literature. Laucks Laboratories, Inc., 1201 Poplar Place, Seattle 44, Washington. SENTRYS *for Pulp, Paper, Softboard, Plywood, Lumber, Veneer.*



**Heads Gulf States Pulp Sales**

WALTER LAWRENCE, who has been appointed to the new post of District Manager of Pulp Sales for the E-Z Pulp Division of Gulf States Paper Corp., according to announcement by J. W. Warner, Executive Vice President of Gulf States, Tuscaloosa, Ala. Gulf States E-Z Pulp Division will start marketing of sulfate woodpulp made its new plant now under construction at Demopolis, Ala. Mr. Lawrence has been in market pulp sales work for many years, recently in New York, and prior to that in Chicago, and he had been calling on paper mills as pulp or other manufacturers' representative for his entire business career.

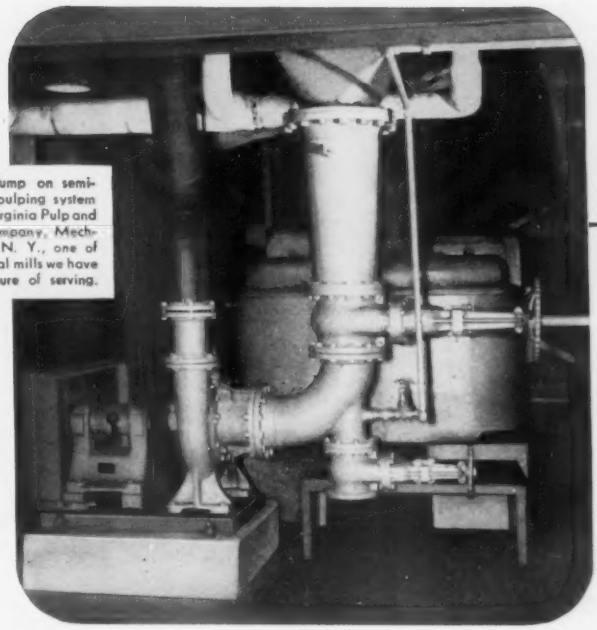
## Why F. C. Huyck & Sons Acquired Waldorf Instrument

F. C. Huyck & Sons has purchased Waldorf Instrument Corp., Huntington Station, Long Island, precision instrument and control equipment company. Huyck's president, G. R. Holden, said the Waldorf management, headed by H. W. Waldorf, president and founder, and B. A. Parkhurst, executive vice president, will continue.

The company, founded in 1934, will continue to design and supply hydraulic servo components for jet aircraft engines and helicopters, and various electronic, hydraulic and electro-mechanical control devices. A new plant in Huntington will bring its manufacturing space to more than 100,000 sq. ft.

F. C. Huyck & Sons, in addition to its main plant in Rensselaer, operates plants in New Hampshire, Vermont and Canada, and recently opened a new 200,000 sq. ft. plant in Aliceville, Ala.

"The marriage of the Huyck company with Waldorf," Mr. Holden said, "is in line with our policy of market diversification."

Warren Pump on semi-chemical pulping system at West Virginia Pulp and Paper Company, Mechanicville, N. Y., one of their several mills we have the pleasure of serving.

***A Company is Best Known by the Customers it Keeps . . .***

and we are very pleased to have

**West Virginia Pulp and Paper Company**

among the valued customers which it has been our privilege to serve over a long period of years.

"Westvaco Quality" holds an enviable reputation in the fields which it serves. Likewise,

**WARREN PUMPS**

stake their reputation upon QUALITY and the ability to engineer and build pumping machinery to meet the individual and exacting requirements of the Pulp and Paper industry.

If you, too, are interested in low pumping costs and dependable service over the years, it will pay you to specify:

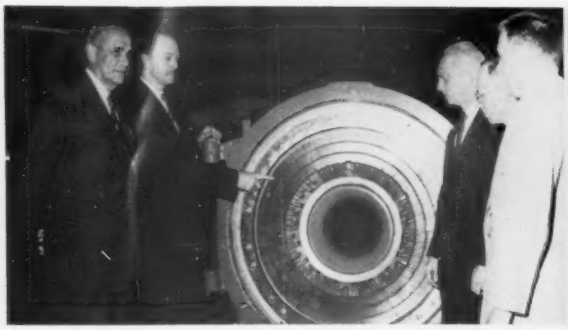
WARREN QUIMBY PUMPS

PP-36

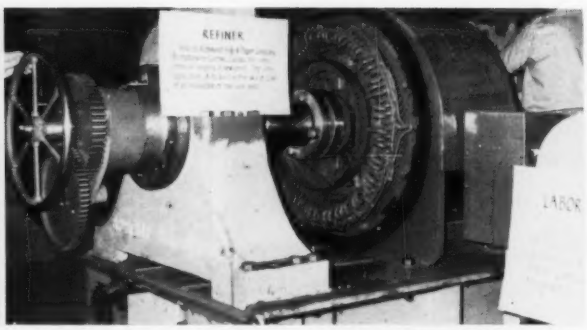
**WARREN PUMPS**

WARREN STEAM PUMP COMPANY, INC.

Warren, Massachusetts



**THIS REFINER IS FOR A NEW PROCESS** for semi-chemical pulping of eucalyptus from newsprint, one of three destined for Australian Newsprint Ltd., Tasmania, Australia. (L to r) HAROLD M. SOARS, Pres., Sprout-Waldron; C. WILLIAM CONVERSE, Mgr., S-W Pulp & Paper Div.; and 3 from NY and Penn—GIB STAUCK, HUBERT PARKER, and GARRETT MITCHELL.




**FOR SEMI-CHEMICAL PULPING OF NEWSPRINT.** Reportedly the only application of its kind in the world, this refiner is one of four units for Richmond Pulp & Paper Co., Bromptonville, Que. Sprout-Waldron disc refiners are used for 60% of semi-chemical pulping, says BILL CONVERSE, Mgr., Pulp & Paper Div., Sprout-Waldron.


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R. S. (Bob) Davis, Greenville, S.C.

**BRANDON** **DRYER FELTS**


## Sprout-Waldron Banks On New Continuous Digester

Sprout-Waldron anticipates a $12 million dollar sales record in 1956. At Muncy, Pa., a half-hour drive from Williamsport airport, it is producing equipment for size reduction (disc refiners, hammer mills), mixing and blending (triple deck horizontal mixers), bulk materials handling (pneumatic conveyors, spiral conveyors), production classification (magnetic separators, screens), and pelleting and cubing.

Today some 750 people are busy turning out this equipment compared to 350 ten years ago. In this same period, nearly $3 million has been spent in plant improvement; payroll has moved from $800,000 to $3,600,000 and sales have increased from $2,000,000 to $12,000,000.

Starting with the manufacture of a hay fork in 1866, Sprout later developed a complete line of flour and feed milling equipment. According to Harold M. Soars, president, the company is a recognized leader in the feed milling machinery industry with sales amounting to 50% of total annual revenue.

Sales to the pulp and paper industry are second, amounting to close to $3,000,000 annually. However, C. William Converse, manager of the pulp and paper division, has definite ideas about bringing these sales to second to none.

A glimpse of what's in Mr. Converse's mind can be gleaned from the news about Sprout-Waldron's brand new continuous digester. Several years have been spent in developing what to date is the largest piece of equipment made by the company and several more will be needed for fruition, explains Mr. Converse. Two units are due to start up soon.

## Industry Men Who Went "Back to School"

This industry's own version of adult education—temporarily bringing key men and young executives "back to school"—was carried out successfully June 18 to July 13 at the Institute of Paper Chemistry, Appleton, Wis.

Men with five years experience in the industry were eligible. Water-derived problems of the industry was the wide general theme of the seminar, bringing in watershed management, aquatic biology, forest growth, wood chemistry, pulping, bleaching and other related subjects.

At six dinner meetings, specialists spoke on financing, manpower, patent uses, human behavior, etc.

This was the first such seminar, especially for this industry, comparable to those in vogue for business men and industrialists at Harvard, Stanford, Northwestern and other schools.

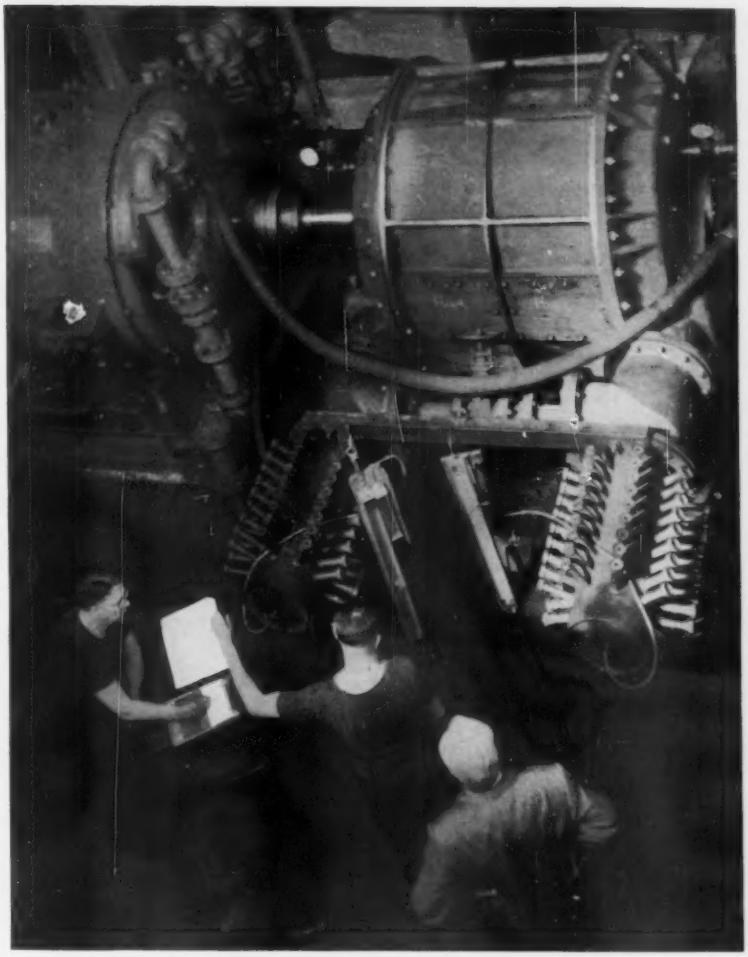
Dr. Willis M. Van Horn was seminar director.

Participants were: George Dlesk, operations manager, American Box Board Co., Filer City, Mich.; Groff Collet, administrative assistant, Consolidated Water Power & Paper Co., Wisconsin Rapids; Kenneth Winrich, chief chemist, Cornell Paperboard Products Co., Cornell, Wis.; Dan P. Ashton, asst. technical supervisor, Crown Zellerbach Corp., West Linn, Ore.;

Edwin H. Olmstead, executive vice president, Eaton-Dikeman Co., Mt. Holly Springs, Pa.; Howard J. Comstock, tech. asst. to paper mill supt., Kimberly Clark Corp., Kimberly, Wis.; Donald W. Gray, assistant woods manager, KVP Co., Espanola, Ont.; Lawrence C. Paulson, statistical control supervisor, Minnesota and Ontario Co., International Falls, Minn.; Harold Annie, tech. director, Oxford Paper Co., New York;

James A. Berard, asst. to paper mill supt., Rhinelander Paper Co., Rhinelander, Wis.; J. D. Dailey, prod. man., Riegel Paper Corp., Acme, N. C.; Robert Dressler, tech. assistant to paper mill supt., Thilmany Pulp & Paper Co., Kaukauna, Wis.; Hugh H. Morton, paper mill supt., S. D. Warren Co., Cumberland Mills, Me.; Robert L. Bentley, asst. man., West Virginia Pulp and Paper Co., Covington, Va.; and Sherwood G. Holt, chief research papermaking eng., Scott Paper Co., Chester, Pa.


## Rated performance of every Nash Vacuum Pump is assured by this precise laboratory test



Rated capacities of Nash Vacuum Pumps are not theoretical. Every Nash Pump is tested individually. Air capacity is determined by delivery thru accurately machined and calibrated orifices. Related vacuum is measured by precise mercury column, and horse power is recorded electro-dynamically. Records of these tests are retained by us, and certified copies are available to Nash Pump owners.

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The DRAPER Felt
DRAPER BROTHERS COMPANY
CANTON, MASS.




**THIS "WUXTRY" DREWS LOTS OF LAUGHS.** Other faked headlines were: Castle & Overton Buys Gottesman and St. Regis," and "Bulkley, Dunton Names 10 New Vice Presidents." (l to r) BILL GILES, West Virginia Pulp and Paper Co.; JOHN LYNCH, John B. Lynch & Co., Inc.; PERRY KOPLIK, Castle & Overton; and DON FRASER, West Va.



**SCENES AT PULPMEN'S OUTING.** (Left) Anders Trophy for low net on 27 holes is presented to STAN McDERMOTT, Bulkley, Dunton Pulp Co., by BILL ANDERS, (retired), Perkins-Goodwin Co. (Right) JIMMY JOHANESON (l), Cellulose Sales Co. and STAN BLANKENSHIP (r), Perkins-Goodwin, take a break.
(Left) Pagel Trophy for low net on 18 holes is awarded by ALEX PAGEL of Pagel, Horton & Co., Inc., to CARL DISKIN, Gottesman & Co. (Right) McCandless Trophy is awarded each year to incoming president. TIM OVERTON (l), Secretary, Castle & Overton, Inc., and outgoing President of New York Pulpmen's Golf Assn., presents trophy to incoming President KARL A. CLAUSON, President of Stora-Kopparberg.

## Pulpmen Elect Clauson

Reception rooms of pulp consumers across the nation were noticeably devoid of pulp salesmen for a couple of days recently. The reason: New York Pulpmen were having their annual golf outing. Chief business was election of new officers: Karl A. Clauson, president of Stora-Kopparberg Corp., moves up from vice president to president; Erik Goranson, Cellulose Sales Co., Inc. graduates from secretary to vice president and Tom Salb, vice president, Bulkley, Dunton Pulp Co., becomes secretary.

## A. F. Wardwell Dies

A. F. Wardwell, president and owner of Carthage Machine Co., Carthage, N. Y., died in early July. For many years he has been widely known in the industry. His son, Nat Wardwell, has headed sales and been principal field representative for the company.

## Sutherlands In Europe

D. Manson Sutherland, founder of the Sutherland Group, manufacturers of Sutherland refiners and breaker traps, and Mrs. Sutherland sail for England Aug. 22 and will return Oct. 11 to New York. Mr. Sutherland plans to visit a number of pulp and paper mills in England, Finland, Austria and Italy.

## TAPPI Meetings Scheduled

Southeastern section of TAPPI has announced meetings for the coming year, the opening session scheduled for Sept. 28 and 29 at Greenville, S.C.

Others during the 1956-57 season will be: Nov. 30-Dec. 1, Brunswick, Ga.; Jan. 18-19, Jacksonville, Fla.; March 22-23, Charleston, S.C.; May 24-25, Savannah, Ga.

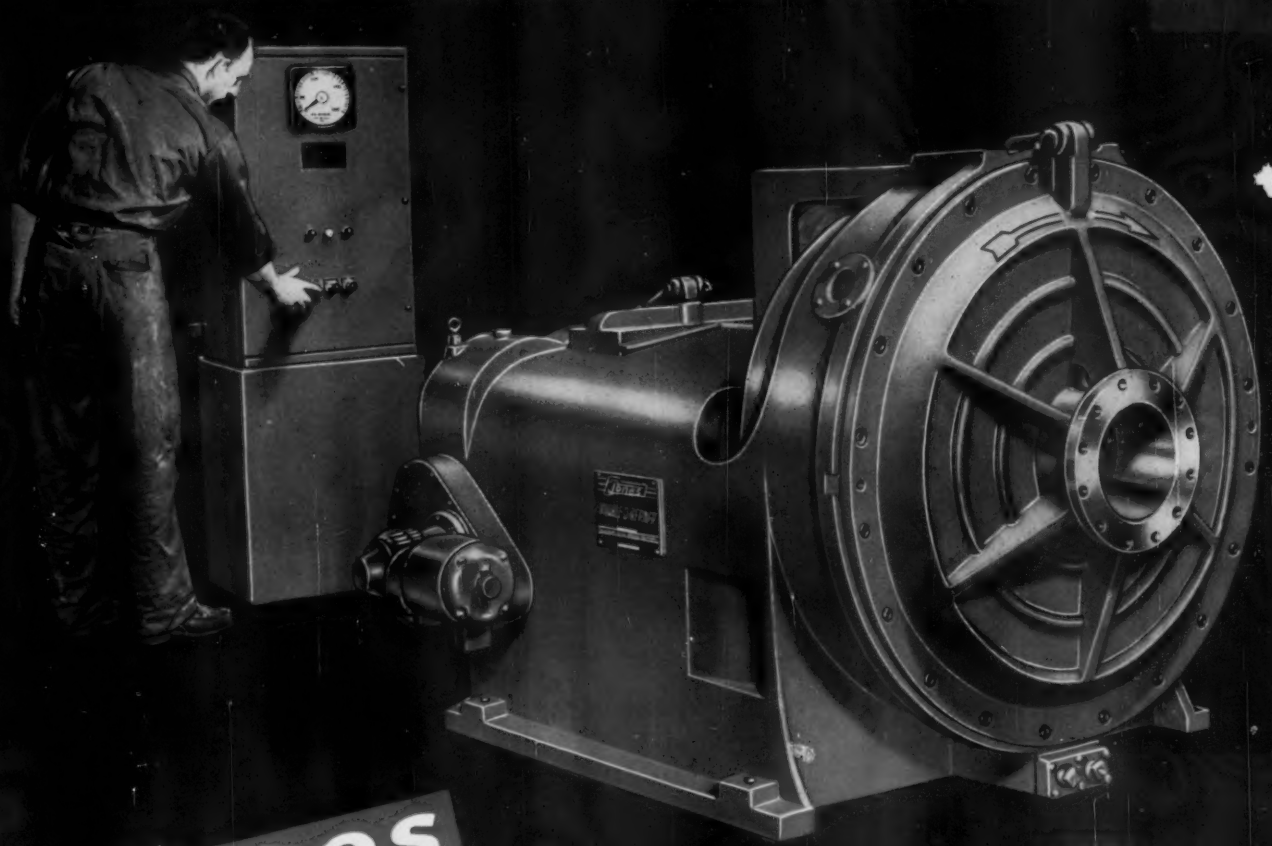
# Does the work of two conventional refiners

The record of the Jones Double-D Refiner has been proved for nearly two years in several large southern mills — and backed up by more recent experience in a number of other mills, some of which have already re-ordered Double-D's. (More than 50 sold to date.)

Not only does the Double-D's double refining area do twice the work of conventional refiners, but users report that it produces stock of equal or better quality than similar machines, at a considerable saving in operating cost.

This performance record of the Double-D has proved the accuracy of experimental forecasts. Fully pressurized, compact and easy to install and maintain, the Double-D effects substantial savings in time, horsepower and floor space.

Ask your Jones representative for details or write direct for Bulletin EDJ-1083.



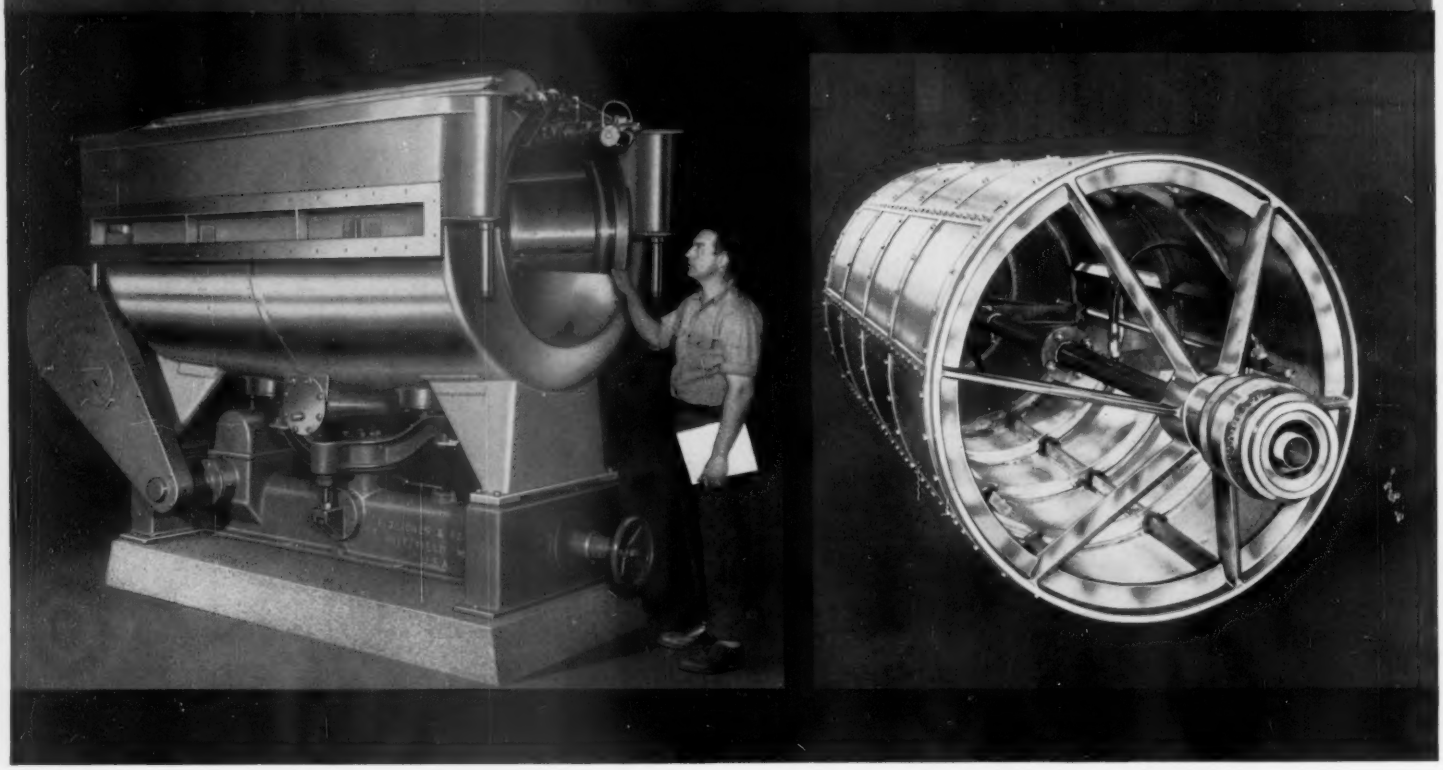
**Jones DOUBLE-D** with DOUBLE EQUA-FLO EFFECT

**E. D. JONES & SONS COMPANY**
Pittsfield, Massachusetts
BUILDERS OF QUALITY STOCK PREPARATION MACHINERY
IN CANADA: The Alexander Fleck, Ltd., Ottawa

Export Agents: CASTLE & OVERTON, INC., NEW YORK 20, N. Y.

Foreign Licensees:
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ITALY de Bartolomeis
JAPAN Mitsubishi

# 50% Higher Oscillation Frequency



Jones IMPROVED

# 40" SCREEN

Based on principles of the original Leith-Walk design, the Jones Screen is the result of our many years' familiarity with paper mill problems and our extensive experience in building screens.

Employing a drum only 40" diameter x 83" long, the Jones Screen is very economical of floor space — yet it will effectively screen the same amount of stock as considerably larger units.

The secret is the vibrator plate which provides vertical oscillations of 450 to 500 per minute — 50% higher than other units — in close proximity to the slot areas. For full details of this and many other features, ask your Jones representative — or write us direct.

**E. D. JONES & SONS COMPANY**
**Pittsfield, Massachusetts**
BUILDERS OF QUALITY STOCK PREPARATION MACHINERY

IN CANADA: The Alexander Fleck, Ltd., Ottawa

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**Choose A Standard SCAM ALARM for *All* Your MONITORING**



Typical Scam DE-LINE annunciator cabinet showing plug-in and backlighted nameplate unit. Cabinets available in four standard widths, 3-5-7 or 11 alarm points wide, any number high.

Even the most advanced automatic system needs the reliable monitoring that only good annunciators offer. And of those available only Scam gives you the benefit of broad standardization and interchangeability to cover the most specialized requirements. For instance, the DE-LINE annunciator can provide, in one standard cabinet...

1. **Backlighted nameplates or bullseye indication.**
2. **Sequential alarm identification.**
3. **Easy adaption for use with Scam DU-ALL annunciators for HI-LO indication.**
4. **Optional ringback or manual reset functions by the operation of a slide switch.**

There are many other standard features of DE-LINE annunciators that are usually provided only on special order – features that make them the most versatile available, capable of "growing" with any control system. Write for literature or call any representative in the cities listed below.

**THE SCAM INSTRUMENT CORP.**

**Chicago 18, Illinois**
**Phone IRving 8-9334**

**SALES REPRESENTATIVES:**
Atlanta • Boston • Buffalo • Chicago
Cincinnati • Cleveland • Dallas • Detroit
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Philadelphia • Pittsburgh • Portland
St. Louis • San Francisco • Seattle • Tulsa
Toronto and Vancouver, Canada


## Moves West To Better Serve Canadian Expansion

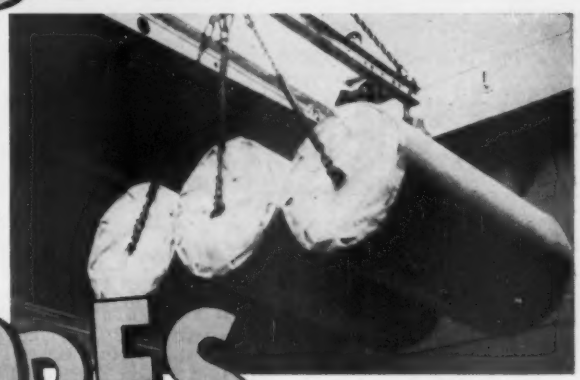
Lloyd Publicover, based in Montreal with Canadian Stebbins Engineering & Mfg. Co. since his discharge from the Canadian army as a major after World War II, has been transferred to the Seattle offices of Stebbins Engineering Corp., the Far West company headed by Albert S. Quinn, president.

Mr. Publicover will continue to serve Canadian Stebbins as vice president in charge of engineering, his move West being made in order to better serve the fast expanding western Canadian pulp and paper industry.



**SHOW NEW PAPER PRODUCT . . .** E. C. GARWOOD (left), Manager, New Product Development and Sales, and WILLIAM J. ZELLERBACH (right), Director of Marketing Services, Crown Zellerbach, show the Tetra Pak container, new in America. G. J. Ticoulat, Vice Pres., Sales, says it reduces packaging cost of a single serving up to 50%.


**TOUGH PAPER MILL AND SPECIALTY CORES**



WITH OR WITHOUT METAL ENDS

**DURO RETURNABLE**

**RHINO NON-RETURNABLE**

**ECONOMICAL CARRIERS FOR –**
• Newsprint • Wax Paper • Blue Print Paper • Fine Papers
• Cash Register and Adding Machine Paper • Cellophane • Tapes
OR any paper that can be wound on a core!

DURO Returnable Cores, with 3" to 6" I.D. Bermico Metal Ends, are made to take abuse on high speed presses. Also made in any diameter and length without metal ends. Proven superior. RHINO non-returnable cores supplied in sizes to fit your needs. Specialty cores from ¼" I.D. up, and ½" to 24' long. Write for free descriptive core catalog at no obligation!




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MAIN OFFICE — HARTSVILLE, S. C.
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PHILADELPHIA, PA. • LOS ANGELES, CAL. • GRANBY, QUEBEC • BRANTFORD, ONT. • MEXICO, D. F.

DEPENDABLE SOURCE OF SUPPLY




**MORRIS** *meets the CHALLENGE of INDUSTRY'S NEW FRONTIERS*

**No Matter What Your Present or Future Heavy Pumping Problems Are . . . Morris Can Satisfy You NOW!**

The new Morris Type RX Slurry Pump is specifically engineered to handle the viscosities, densities and special characteristics of the slurries and sludges developing from industry's ever-advancing products. It is engineering attuned to the future . . . designed to meet the demands of a towering tomorrow.

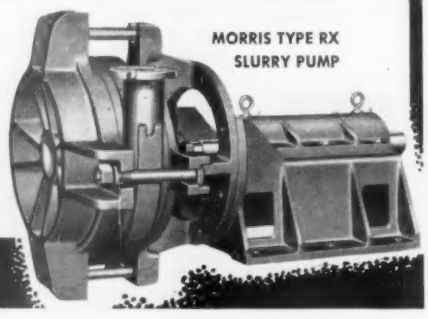
**Rugged, Dependable, Trouble-Free; Operates With Minimum Attention . . . Cuts Maintenance Costs!**

The new Morris RX is designed for performance perfection under all conditions, including heavy, coarse, fine slurries, dispersions and sludges. Operates at low speeds; quickly dismantled for inspection, avoiding lengthy lay-up time.

**MORRIS MACHINE WORKS**

Baldwinsville, N. Y. *Sales Offices in Principal Cities*

**FREE SERVICE:** Morris engineers will gladly recommend the custom-made pump best suited to your needs. Send necessary data today.



MORRIS TYPE RX SLURRY PUMP

**MORRIS** CENTRIFUGAL PUMPS


RAYONIER
INCORPORATED
[illegible] East Forty-second Street, New York [illegible], N. Y.

MEMORANDUM

Subject: Public Relations Policy

To: Rayonier Division Managers

It is good business for an industry leader to make itself publicly understood and respected.

Rayonier will continue to explain its policies, motives and aims to its large, diversified world audiences.

Answer all legitimate questions about Rayonier. Don't dodge issues. If you don't know the answers, get them.

James T. Sheehy
Executive Vice President

**COMMUNITY RELATIONS** policy of Rayonier Inc. was outlined to public via this "memo" in recent ad.

## Where Should Mills Draw Line in Community Affairs?

Rayonier, Inc., recently ran a national ad outlining its community relations policy. With a thought-provoking headline, "Does 'the company' live your life for you?", it stressed a hands-off public relations policy: said most Americans want to think and do for themselves; that they don't want employers to interfere in every aspect of community life and its problems.

In a statement to PULP & PAPER, a Rayonier spokesman said the company accepts its community responsibilities, such as tax-paying, for example, and asks no favors. Because it is big, it doesn't expect to be discriminated against, says it, too, has rights.

Rayonier assists "valid" community projects such as Red Cross, Boy Scouts, etc., but refuses to play what it calls "Santa Claus," become a soft touch for every community activity. It says its first responsibility is to provide decent jobs and fair wages.

Rayonier reports the ad brought hundreds of favorable comments. From Waterloo, Ia., an attorney wrote: "It is comforting to read of a company with the courage to confine its activities to the legal purposes for which it was created, to hire employes for specific work and jobs, and not to buy their minds and souls."

## Mills in Pennsylvania Ordered to Reduce BOD

Orders have been received by at least seven mills from the Pennsylvania Sanitary Water Board requesting they provide treatment for wastes which will achieve a BOD reduction of 85%. Experimental work has been underway at several of these mills on the application of biological treatment methods.

# EQUIPMENT AND SUPPLY NEWS

**"NO-DRIP" PIPE NOW SERVES CALENDERS** . . . A "super-dripless" shower pipe has been developed by J. H. Dupasquier, Gladstone, Ore., for specialty steam applications on calenders, supercalenders and other uses where steam is to be supplied to the sheet by discharging from the pipe in upward direction. This new type applicator is already proving out productionwise at some Pacific Coast mills. The unit is built of aluminum. According to Mr. Dupasquier there's "no spitting, no sputtering, no drip—even when handling extremely wet or saturated steam" if applied in upward direction.

He says the "super" is designed to be installed only in level position and consequently steam jets are equidistant from the sheet.

**SEAMLESS OR WELDED CARBON STEEL TUBING FOR PRESSURE USES** is detailed by Tubular Products Div., of Babcock & Wilcox Co. Bulletin TDC-142A describes mechanical and physical properties and fabricating operations on such tubing. B&W also offers bulletin TB-412 emphasizing the quality, dependability and economy of electric resistance welded carbon steel tubing in applications involving heat transfer. A chart outlines hydrostatic test pressures required for various tube sizes. Both bulletins are yours by writing to Beaver Falls, Pa.

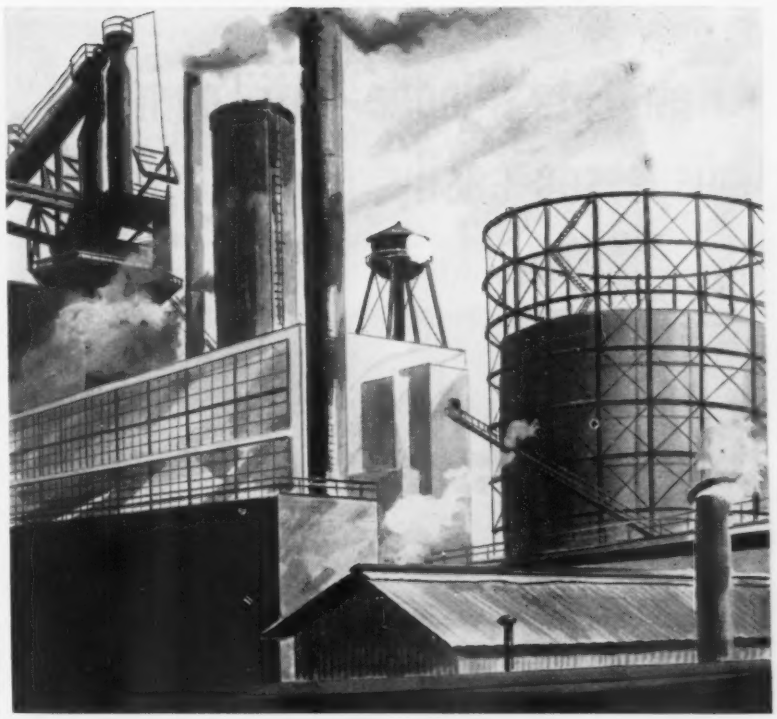
**BAUER PROCESSING EQUIPMENT IS DESCRIBED** in bulletin No. 56. Included are chip digesters, stock refiners and Centri-Cleaners. Write to Bauer Bros. Co., 1706 Sheridan Ave., Springfield, O.

**BETA GAUGES WITH TWICE THE SENSITIVITY** previously available are announced by Tracerlab. It uses radioactive Krypton as a source of radiation and is designated as model BG-7. Questions will be answered by W. A. Stenzel, Liberty 2-7900 in Boston or if you write: Industrial Division, 130 High Street, Boston, Mass.

**AN EFFICIENT HEAT TRANSFER INSERT** in cooling rolls for polyethylene laminators, hot melt coaters and plastic cooling trains will be exclusively used by Dilts Div. of the Black-Clawson Co. Known as the Gross-Dilts heat transfer insert, it has shown increased cooling up to 50%.

**CHEMICAL CLEANING SERVICES** are detailed in a series of folders offered by Dowell, Inc., Box 536, Tulsa 1, Okla.

**HOW VIBRATION MONOTORS DETECT MALFUNCTIONS** in rotating equipment and how the devices are installed and adjusted are explained by the Beta Corp., Box 8625, Richmond 26, Va. Ask for Bulletin 500-IA.

***This Is the Year to Paint Your Plant***

**PRODUCTION BOOM IS COMING: PAINT NOW WHILE THERE'S TIME**

You know what happens to plant maintenance when plants are operating at capacity — it just gets "put off." And the longer it's put off, the more costly it is to handle. In fact, if you postpone painting just one year, it can cost you double or triple today's cost!

Important days are just ahead. Prepare for them *now*. Repair and restore masonry surfaces, stop corrosion of iron and steel, improve "seeing conditions" to boost morale and production. And the way to start is to consult America's maintenance coating specialists. Use the *free* plant survey service of Truscon Laboratories, who for nearly fifty years have led the Industry in maintenance know-how.

Keep this in mind. There is no single coating for all maintenance problems. Different surfaces, different conditions require different protective coatings. Here's where you can save money — by using specialized coatings that have greater corrosion resistance, greater weather and wear resistance. As a result, you paint less often. Your Truscon representative will provide prompt plant inspection, color guidance and coatings consultation. No obligation to you. Absolutely. Send coupon now for immediate action.

***Send For New 1956 Truscon Hand Book Of Information***

**TRUSCON** *Laboratories*

Industrial Maintenance Division of Devoe & Raynolds Co., Inc.



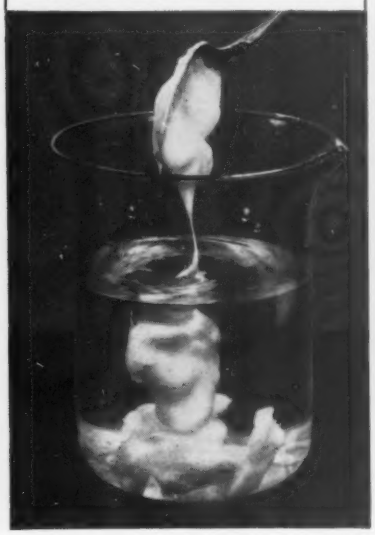

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KILL FOAM THE EASY WAY...

# New G-E silicone Anti-Foam 60 disperses easily—pays for itself

CONVENTIONAL ANTI-FOAM



Conventional high-viscosity silicone anti-foam agents (above) do not disperse readily in water—require vigorous stirring.

NEW G-E ANTI-FOAM 60



Low-viscosity G-E ANTI-FOAM 60, however, can be *poured*—and disperses instantly!

Costly, troublesome foaming in paper-making operations can now be controlled—more easily—with General Electric's new silicone ANTI-FOAM 60. Easy to disperse, this low-viscosity silicone emulsion can be used as supplied, or reduced with water to desired concentrations with *little or no stirring*.

**ANTI-FOAM 60 pays for itself** by the way it reduces processing time, eliminates costly boil-overs, increases kettle capacity. Incredibly small amounts are needed, for example:

**1 PPM in black liquor processing**
**100 PPM in latex coatings & adhesives**
**50 PPM in aqueous pigment-binder formulations**
**5 PPM in paper sizes**
**60 PPM in beater stock**

FREE SAMPLE!



SILICONE PRODUCTS DEPARTMENT — Section 260-1A
GENERAL ELECTRIC COMPANY — WATERFORD, N. Y.

Please send me a free sample of G.E.'s new silicone ANTI-FOAM 60.

Name_____ Position_____

Firm_____

Street_____

City_____ Zone_____ State_____

IN CANADA: Mail to Canadian General Electric Company, Ltd., Toronto

*Progress Is Our Most Important Product*

GENERAL ELECTRIC

**EXTRUSIONS OF HIGH-ALLOY SEAMLESS TUBING GRADES** not previously available anywhere are now being produced, reports the Tubular Products Div., of The Babcock & Wilcox Co. Details are in its bulletin TB-413 from Beaver Falls, Pa.

**CONTINUOUS MEASUREMENT AND PRODUCTION CONTROLS** of sheet paper and board are objects of a new series of Beta radiation, non-contact weight gauges, Atom-At, produced by Nuclear Corp. of America, Inc., Empire State Building, New York.

**EXPANSION GOES ON AMONG SUPPLIERS.** Ted Detcher, president of Chemical Linings, Inc., Watertown, N.Y., reports purchase of a 3-story building at 158 Stone St., Watertown, for future headquarters.

**INDUSTRIAL ELECTRICAL HEATING UNITS ARE LISTED** in a revised catalog (27-620) available from Westinghouse Electric Corp. Write to Box 2099, Pittsburgh 30, Pa.

**PANELLIT SERVICE CORP. HAS BEEN SET UP** by Panellit, Inc., as a subsidiary to handle the instrument services division of the parent company.

**COMPLETE LINE OF MATHIESON CHEMICALS** for industry is listed in a new booklet by Olin Mathieson Chemical Corp. Ask for it from the Industrial Chemicals Division, Baltimore 3, Md.

**A NEW DIRECT-READING DIGITAL INDICATOR** designed primarily for its turbine flowmeters has been developed by Fischer & Porter Co., Hatboro, Pa. The unit features a completely digital system, operating from the frequency output of the turbine meter, which takes full advantage of the remarkable linearity and repeatability inherent in the turbine meter primary.

**INTERLOCKED ARMOR CABLE IS FEATURED** by General Electric's Wire and Cable Dept., in publication 19-555, available from Bridgeport, Conn.

**HOW TO INSTALL TRANSITE PRESSURE PIPE** for overhead industrial water and process lines is described by Johns-Manville in a pocket-size booklet. Included are diagrams of typical Transite systems for overhead lines and also covers hanging and supporting the pipe, bracing for thrusts, poured flange coupling and the Roto-Split flange coupling.

**VIBRATORY MATERIALS HANDLING EQUIPMENT** is featured in Syntron Co.'s No. 564 condensed catalog available from them at 659 Lexington Ave., Homer City, Pa.

**BULK MATERIALS HANDLING PROBLEMS** are detailed by the Frank G. Hough Co., Libertyville, Ill., in "Modern 'Payloader' Tractor Shovels in Industry." Ask for No. 304 from the company at 891 Seventh St., Libertyville, Ill.

**AUTOMATIC SHEET PAPER COUNTERS** and pile markers in new models have been developed by Charles R.

Stevens, Inc., 2017 Sylvania Ave., Toledo, O.

**TUBE TURNS PLASTICS INC.** announces "the first self-lubricated plug valve" to be injection molded of polyvinyl chloride. It is designed to handle a wide variety of corrosive fluids more efficiently and economically than conventional valves. The new PVC valve will reduce replacement costs and downtime, minimize purging and eliminate the product contamination problems often experienced when certain fluids encounter metallic components of piping systems.

Tube Turns Plastics, Inc., is owned jointly by National Cylinder Gas Co., Chicago, and Jackson & Church Co., Saginaw, Mich.

## European Belting is Tested

An industrial belting, reportedly a standard for the European paper industry, is making its debut in the U.S. Extremultus belting is a specially chrome-tanned leather friction surface permanently bonded to a superior polymer for maximum tensile. It is thinner, lighter and usually one-third as wide as ordinary belting.

PULP & PAPER asked the chief engineer of one mill how they liked it. "Before we put them in," he said, "we checked with several mills and they were enthusiastic about it. We've had them on for two months now and are very much in favor of them.

Ken Tsunoda, of Extremultus, Inc., cited these advantages: (1) Performs exceptionally well wherever high speed, smoothness, dependability, freedom from stretch, high starting loads and ability to absorb severe shocks are important. (2) Its unique friction surface will outpull wider belts and its greatly reduced width results in considerable improvement in speed regulation on cone drives. Higher pulley ratios are possible and the new belting has been run at ratios of 20 to 1 with pulleys almost touching.




*Overlooking the Fenway*

**Boston,** *Mass.*

Attractive, comfortable, homelike rooms, suites and kitchenettes—near Kenmore Square and Boston University. Modern, fireproof building. *from* $6 double

FAMILY PLAN
Special rates for permanent guests.

Hotel **CANTERBURY**
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Research Results Speak Louder than Words . . .



**CHIEF SANDUSKY**

***FERROUS AND NON-FERROUS CENTRIFUGAL CASTINGS FOR ROLL SHELLS, COVERS, AND LINERS . . . . . .***

The success of a centrifugal casting is often determined long before the metal is melted and the casting formed. At Chief Sandusky, it starts in the research laboratories where experienced technicians are continually searching to improve existing methods and develop new ones to meet your specialized needs.

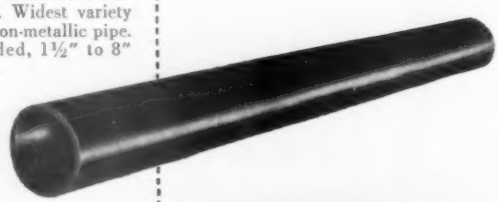
Each casting is then quality controlled through every step of the production process. The result of this supporting and preceding control is a finer, closer grained product which resists heat, corrosion, and abrasion.

***Whatever your needs in ferrous and non-ferrous centrifugal castings—or in the way of technical aid or information, call on Chief Sandusky . . . continual leader in its field, continually improving its service to you.***

**Chief SANDUSKY CENTRIFUGAL CASTINGS**
FERROUS AND NON-FERROUS
**SANDUSKY FOUNDRY AND MACHINE CO., Sandusky, Ohio**

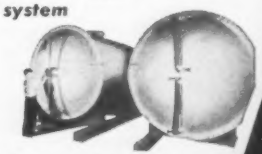
**OLDEST PLASTIC PIPE STILL "TOPS"**

ACE hard rubber . . . now more than a century old . . . long the finest corrosion-resistant pipe available. Widest variety of fittings of any rigid non-metallic pipe. Sizes ¼" to 8" threaded, 1½" to 8" flanged. *Bulletin CE-51.*



**LIFE-TIME**
**ACID STORAGE TANKS**

***Rubber-lined by ACE***
***2-layer system***

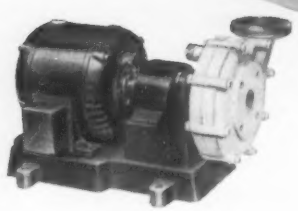


Economical, universal protection against all alkalis, metallic salts, practically all inorganic acids, hydrochloric acid any strength, sulphuric to 50%, nitric to 20%, phosphoric to 75%. Good to 160 deg. F. . . . sometimes higher. Soft rubber interlayer aids shock resistance.

**ACE** chemical equipment

*"more resistant to more corrosives"*

Complete line of rubber and plastic processing equipment . . . eight basic materials for pipe and fittings, valves, pumps, tanks, molded parts, utensils, etc.



**ACE "WAM" . . . THE FINEST**
***Non-metallic Acid Pump***

On job after job, this 80-gpm. centrifugal pump has earned highest praise. Hard rubber casing and impeller, Hastelloy C shaft. Handles nearly all corrosives. Mechanically simple, trouble-free. *Bulletin CE-55.* Larger ACE pumps available.



**TOUGH ACE-ITE PLASTIC PIPE**

General-purpose moderately priced rubber-plastic pipe handles most common chemicals to 170 deg. F. . . . except few strong acids and organic solvents. Tough, odorless, tasteless. Rigid pipe ½" to 6". *Bulletin 80.*

**ACE rubber and plastic products**

**AMERICAN HARD RUBBER COMPANY**
**93 WORTH STREET • NEW YORK 13, N. Y.**



**CONFIDENTIAL EMPLOYMENT SERVICE**

For employers seeking executives and executives seeking positions. No fee to be paid by applicant, unless employment is accepted through us.

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**PROFESSIONALLY SERVING . . . the specialized needs of responsible entities within the industry, both corporate and individual**

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**PERSONNEL CONSULTANTS TO THE PAPER INDUSTRY**

PROCUREMENT . . . of qualified personnel FOR mills, converters and distributors.
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CONSULTATION . . . with top management on matters involving the application of human effort.

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**PAPER MEN**
**$5,000 to $100,000**
**PRODUCTION—SALES—MANAGEMENT**

**We have immediate openings for qualified men in all phases of the paper industry. If you have experience; are looking for bigger responsibilities or a general management assignment, we can assist you. No retainer or placement fee to be paid unless you accept employment through us. For confidential service call, wire or write.**

**FRED J. STEFFENS**
**Personnel Consultant to the Paper Industry**
**CADILLAC EMPLOYMENT AGENCY, INC.**
**220 South State, Chicago 4, Illinois**
**Phone: WAbash 2-4800**

**TECHNICAL SERVICE REPRESENTATIVE**

Have position for energetic, conscientious man to work on West Coast. Must have background in chemistry and bacteriology. Mill experience desirable but not necessary. Please send personal data and outline of education and experience to Box 277, PULP & PAPER, 370 Lexington Ave., New York 17, N. Y.

**FOR SALE**

9 Wire Covers for IMPCO Feltless Wet Machine. 158" x 317" Bronze Double Cable, 17 x 24 Mesh. 1 Wire Cover for Kamyr Wet Machine 193¾" x 130". Bronze Double Cable 17 x 24 Mesh.

Riegel Paper Corporation, Carolina Div., Acme, N.C.

**SALES REPRESENTATIVES WANTED**

A paperboard manufacturer has openings for two sales representatives in Southern and Southeastern areas. Please reply to Box 275, PULP & PAPER, 370 Lexington Ave., New York 17, N.Y.

# CHEMIST or CHEMICAL ENGINEER

*Pulp and Paper*

Dorr-Oliver, an international firm of process engineers, offers a challenging and rewarding future to a young graduate who has about two years' mill experience.

Initial assignments: pulp research, development, and testing.

Location: Connecticut.

Future assignment: according to interest and ability, in Research and Development, in Sales Engineering, or as Pulp and Paper Technical Specialist.

*Address detailed resume to:*

E. E. Johnson,
Director of Personnel

**Dorr-Oliver Inc.**

Barry Place
Stamford, Connecticut

# CUSTOM FABRICATING DATA—Request New Brochure P-56




This information on plant facilities and services will be of value to purchasing, procurement and engineering personnel when planning the custom fabrication of...

# PRESSURE VESSELS

for the
Pulp & Paper Industry
on the West Coast

*Send blueprints for quotation on your next job*

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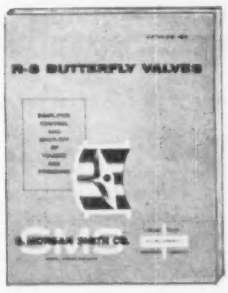
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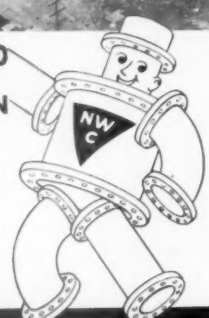
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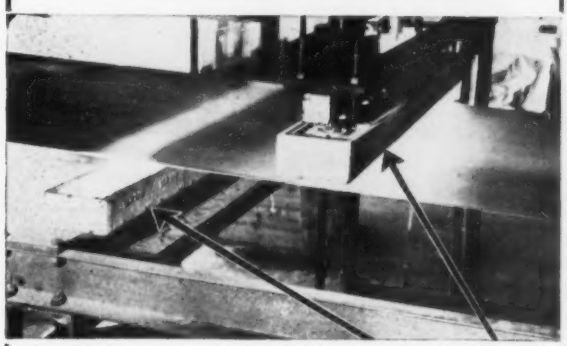
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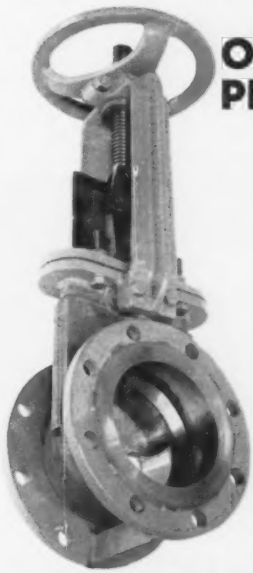
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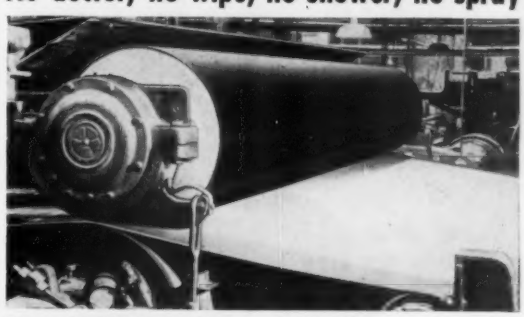
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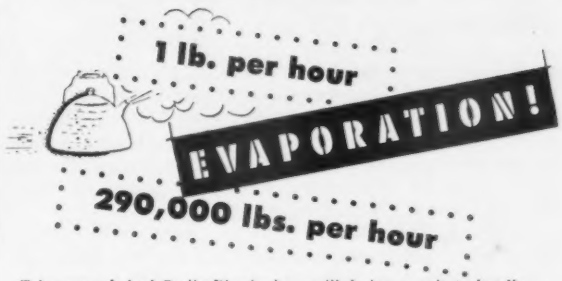
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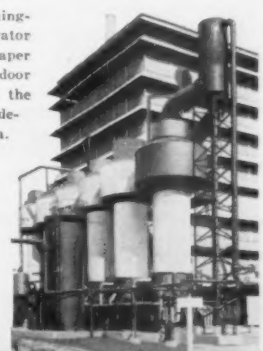
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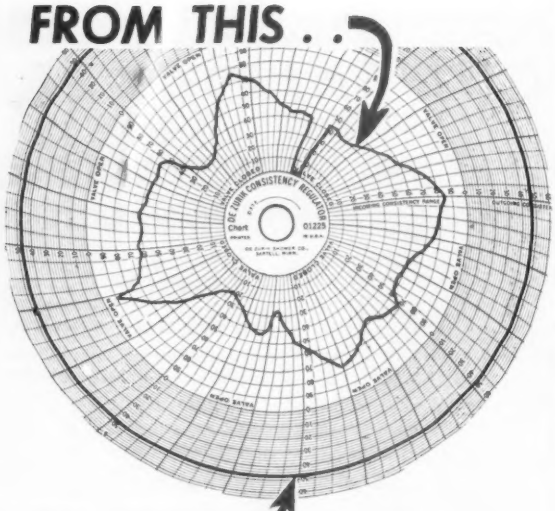


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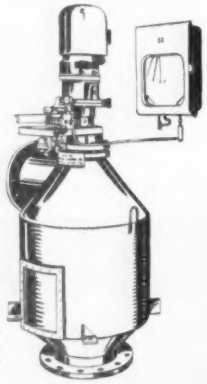
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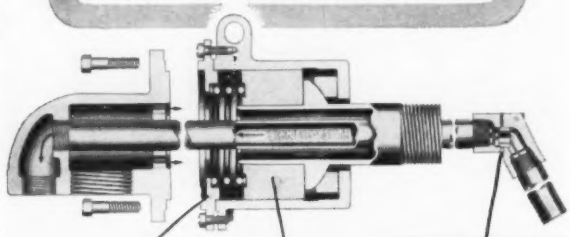
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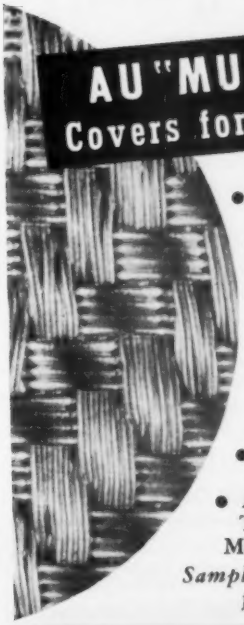
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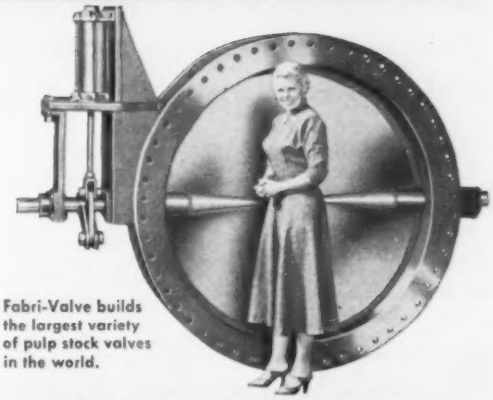
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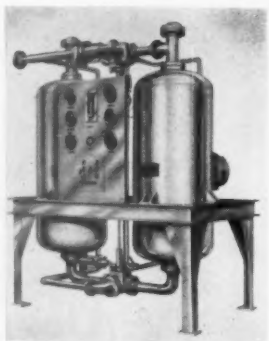
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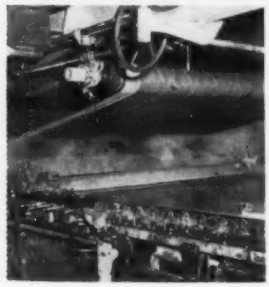
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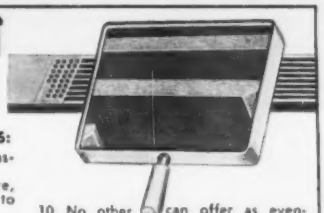
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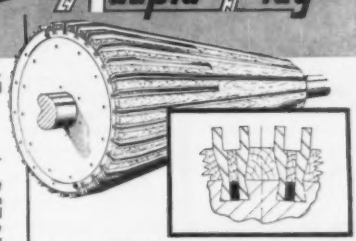
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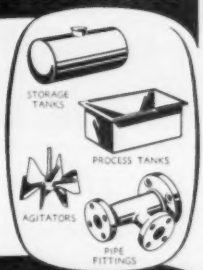
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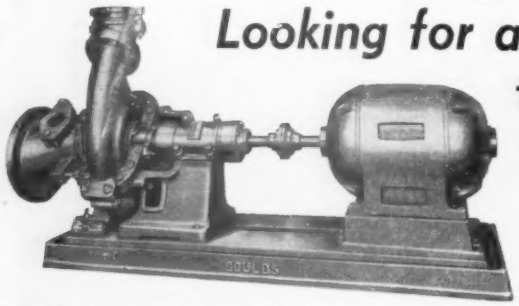
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# The LAST WORD PULP & PAPER EDITORS' PAGE

## SUBJECT: PUBLIC RELATIONS

### 1. What Mills Did in Wisconsin

Public relations of the pulp and paper industry are almost in a category with the weather. Everyone talks about it, but most of the critics have nothing specific in mind to do about it.

In this editorial column, many months ago we pledged that we were not going to join the hue and cry of the pack which criticises this industry in generalities and with blanket indictments as regards its public relations. We were mighty pleased, later on, when we saw that particular PULP & PAPER editorial blown up and framed and hung prominently in the main offices of one of the biggest paper companies in America.

We stick to our statement at that time, to the effect there are some pretty well qualified men in this industry who have given a lot of thought to public relations and are doing a pretty shrewd job of furthering them in a high level, intelligent manner. The Wisconsin industry, for instance, has done a remarkable job in completely reversing the general attitude of the Wisconsin public in respect to pollution problems. Today, the people of Wisconsin understand these problems much better and are intelligently supporting their industry. In one town, recently, the citizens rose spontaneously to defense of the local mill against a punitive control measure.

### 2. More about Your "Ultimate Salesman"

But getting down to some particulars regarding public relations, we intend to speak out . . . when we feel we have some constructive ideas . . . not just blanket criticism.

That's the way we feel about a subject which we raised on this page in July. We suggested that the manufacturers of pulp and paper should give more attention to their "ultimate salesmen." Newsprint mills should get closer to their little salesman—the newsboy. Pulp, paper and board manufacturers should make an effort to figuratively leap across the barriers that separate them from the grocery store clerk, the bookshop or stationery saleslady, the door-to-door salesmen, who are the last persons to handle their products.

Instead of thinking of public relations as some monstrous propaganda mill that reaches the "masses"—as do the "experts" of political ideologies—it might be more productive of concrete beneficial results if the pulp, paper and board industries think specifically in terms of the actual folks who are at the end of the line in merchandising their products.

All the "Congressmen Cellers" in Washington, D.C., can't do much about harassing the newsprint industry, for political advantage, if the people who work for newspapers—the editors, reporters, photographers, pressmen, newsboys—know all the facts of life concerning how the paper they use is made and all that this process entails.

### 3. Reaches the "Voices" of America

Authors, poets, editors of magazines as well as newspapers, literary critics, syndicated columnists, financial writers, sports editors, photographers, cartoonists, reporters of every kind—these are the people who would be silenced completely or driven to TV and radio (where most of them could not qualify) if there was no book paper and newsprint. The technical quality of these paper products is a factor in winning them more readers and more satisfied readers, too.

We will go a step farther than we did in July and suggest these people should be "educated" as regards the raw material they use in their work. We think it is more important to enlighten these people than the publishers who employ them and who buy the book paper and newsprint. Reveal to them the exciting and dramatic story of paper, tell them about the stability of this industry, the fine opportunities and jobs that are to be found in it, the splendid opportunities for advancement, the fact that this industry has more capital investment than almost any industry at stake in the hands of a handful of workers who must be topnotch men—take them to your mills and show them what's going on. Show them what the industry is doing about forest genetics, new pulp and paper uses, etc. enriching and broadening the lives of people who work in this industry.

That, we submit, is a constructive suggestion as regards the public relations of the pulp and paper industry.

### Why Acid Was in the Paper

Here's a story to end all stories on buck-passing. Dr. Malcolm May, pulping section, Institute of Paper Chemistry, received a much longer version from one of his former colleagues at Champion Paper in Texas. Leaving various alibis to your imagination—here is a brief version.

A batch of printed paper had been delivered to Mr. Owner. The printing was so bad he couldn't recognize his own picture. He called the printing salesman, who passed the buck to the print shop proprietor, and he to the plant superintendent. The job was done on night shift, so various bindery, composing and press room foremen were called in. They unanimously blamed the engravings.

That put the engraver's salesman on the spot, but he slipped right out of it. The engraving foreman was next and, as he said his proofs were all good, he surmised there must have been acid in the paper which etched the engravings. Thereupon Mr. Owner turned his wrath successively on the paper salesman, the paper wholesaler, the paper mill and then, the pulp mill. Each had a perfect alibi.

So the acid must have been in the logs, purchased from a lumber company. The outraged Mr. Owner was relentless. The lumber company couldn't get away with the alibi that it didn't make the trees. The lumberman kept a cross section of every tree cut down, and after checking a few thousand stumps, he traced Cross Section 999,000 to the offending tree. Inquiries continued. An old guide remembered a hunting dog had been tied to the tree years ago.

Wait—that isn't the end of the story. They found a dog license at the base of the stump. The dog belonged to the same Mr. Owner who originally complained about the printing job!

* * *

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